

Importance of *Sira* in *Ayurveda* as per *Sushruta Samhita*

Dr. Jyoti gangwal^{#1}
PG Scholar^{#1}

Dr. Vikash bhatnagar^{*2}
Associate professor^{*2}

Dr.Sandeep M. lahange^{*3}
Assistant professor^{*3}

Dr. Sanjay Kholiya^{#4}
BAMS^{#4}

Department of Sharir Rachana
National Institute of Ayurveda, Jaipur
NIA, Jaipur

Abstract -*Ayurveda* is a science of healthful life. The structural concept of human body For know and treat the disease which is reported by old text of *Ayurveda* like *Rachana Sharir* is very important. *Charaka samhita*, *Sushruta samhita*, and *Vagbhata samhita* are three great *Brihatrayi* of *Ayurveda*. the school of surgery is representing *Sushruta samhita*. *Sushruta samhita* is the best In *Sharira*. *Sushruta* has simplified the difference between *sira*, *dhamani* and *srotas*. The word *sira*, shows a meaning of nerve in one place while at other, it means blood vessels. In this state it is very hard to know about it such as Modern Anatomy. That's why, it needs huge research work to acquire a clear concept.

KEYWORDS- *Sushruta*, *sira*, *srotas*, *dhamani*, Modern anatomy.

INTRODUCTION

Ayurveda is a science of healthful life. The structural concept of human body for know and treat the disease which is reported by old text of *Ayurveda* like *Rachana Sharir* is very important. *Charaka samhita*, *Sushruta samhita* and *Vagbhata samhita* are three great *Brihatrayi* of *Ayurveda*. The school of surgery is representing *Sushruta samhita*. *Sushruta samhita* is the best in *Sharira*. It was essential for *Sushruta* to deal with details of anatomy before preparing for surgery because anatomy being the starting point of surgery. It is further feasible that the appreciation of anatomy more progressed during the era of *Sushruta*. In *Vedic* times before *Sushruta*, the anatomical knowledge was obtained from the animal's dissection. *Sushruta* was the pime scientist who narrated the process of the dissection of human dead body and draw attention on the significance of dissection in study of anatomy. However it may be got as an ancient benchmark in the evolution of Anatomy in India. So that the *Sushrut samhita* is the best text in *Sharira* and he is called the father of Anatomy. *Dr.Ghanekar* tells that his *Sharira sthan* part is the best part, but hard to interpret. He has told in his *Sharira sthana* 7th chapter "*Siravarna Vibhakta Nama Shariram*" about the Anatomy of *sira*. His concepts ideas about "*Sira Shariram*" and "*Sira vedhyavidhi Shariram*" are special. But the word *Sira*, shows a meaning of nerve in one place while at other, it means blood vessels. In this state it is very hard to know about it such as Modern Anatomy.

AIMS AND OBJECTIVE

- 1.To detail study about *Sira*.
2. To study about its anatomical importance.
3. To find out the references in *Sushruta samhita* about *Sira*.
4. To perceive the concept of *Sira* in *Sushruta samhita* and compare with Modern Anatomy.

CONCEPTUAL REVIEW

Acharya charak mentioned in *Sutrasthana* the term *Sarnat Sira* about *Sira* which means the flowing (*Saran Kriya*) of blood in blood vessels. According to *Sushruta* the *Nabhi* is the origin of *Sira*. *Sira* extent from *Nabhi* to all over the body. There are two types of *Siras* some of them may be pierced for treating the disease and some of *Siras* are called *Avedhya Sira* which is contraindicated for *Siravedhana* (venesection). Which are total number of *Siras* are 700 in which *Vedhya Sira* are 602 and *Avedhya Sira* 98 in human.

MATERIALS AND METHODS

The classical matter about *Sira* has been compiled from *Sushruta Samhita*'s different *Sthans* (parts) and B.D. Chaurasia General Anatomy, Gray's Anatomy etc. Modern Anatomy books.

DEFINATION

Acharya Charaka said that the passage from there the blood or fluid etc. is run from one to another place are called *Sira*. Due to the process of "*Sthanantara Gamana*" or *Sarana*" *Commentator Chakrapani* has said that the channels are *Sira* *Acharya Sushruta* told about the special features of the *Sira* and mentioned that *Sira* are naturally unstable and modified their location as a fish.

SYNONYMS

Acharya Charaka mentioned many synonyms about *Sira* in *Viman Sthana* 5th chapter like veins, channels, arteries, capillaries, ducts, tubes, tracts, lacunae, passages, glands, bladder etc. these words are basically use for seen and unseen spaces which present in the body. *Acharya Sushruta* told that the organs present with hollow space ("*Avakas*") in the body are described as *Sira*, *Marga*, *Srotas*, *Dhamani*.

ANATOMICAL CONSIDERATIONS ON SIRA IN SUSHRUTA SAMHITA

Acharya Sushruta mentioned that *Sira* used in two motives as a normal it used to indicate the vessels or as a particular it means veins. artery, capillary, vein, and lymphatics are included in *Sira* according to *Acharya Sushruta*. He also mentioned *Sira* as a nerve in some references.

ORIGIN -

Sushruta mentioned in his text that in the fetal life *Sira* arise from umbilicus (*Nabhi*) and they extent from here to ascending, descending and in oblique direction. But this is only accepted during fetal life because it provides the nourishment to the foetus by the umbilical cord, after that this is extinct. Due to starting and ending point in *Nabhi* in embryonic life *Sushruta* has tagged them "*Nabhiprabhava*".

STRUCTURE OF SIRA

Sushruta described that formation of *Siras* are seems to be the minute fibrils in the leaf, broad at roots and thin to the end. The blood runs in the *Sira* which are "similar to water passage turn out to the separate region of a garden. Modern Anatomy also think the same about the *Sira*. Big arteries go away from the heart and give branches into smaller arteries that supplies the different areas of the body. They again divide into minute vessels termed arterioles that pierce the tissue of body. Inside the tissues, arterioles give branch into web of capillaries. When the blood exchanges substances with the cells materials go inside and outside of the capillary walls. After that departed from the tissues, capillaries changes into small veins, called venules. The venules unite to formation of big and big veins that go back to blood towards the heart. The walls of veins, capillaries and arteries vary in composition. The wall of vessels bounded a vacant center by which the blood runs.

GENERAL FUNCTION

The *Sira* provides nutrition to the tissues of body through their dilatatory property and contractility like a water channels is provide nutrition to a garden.

CLASSIFICATION

There are 4 types of *Sira*-

1. *Vatavaha Siras*
2. *Pittavaha Siras*
3. *Kaphavaha Siras*
4. *Raktavaha Siras*.

These all types are having their specific colour, character and function (13).

Type of Sira	Colour	Character	Function	Modern correlation (14)
<i>Vatavaha</i>	<i>Aruna</i> (crimson red)	Fill up by <i>Vayu</i>	Do physical work not hampering the special work of <i>Buddhi</i> (intellect) and sense organs.	Nerves Arteries
<i>Pittavaha</i>	<i>Neela</i> (bluish)	Hot in touch	Generate lusture and succeed fine appetite.	Veins
<i>Kaphavaha</i>	<i>Gora</i> (white)	Cool to touch and stable	Provides lubrication to the different body parts and generate hardness in the joints. It raise strength.	Lymphatic
<i>Raktavaha</i>	<i>Rohini</i> (red)	Not so hot nor so cold	Provide Nourishment to the dhatus and refines the complexion.	Capillaries

DISCUSSION

In our *Vedas* there is mentioned about anatomical organization of *Sira*. There is description of hundreds of *Siras* in *Atharva Veda*. The colour of these *Siras* are coppery red, carry *Ashuddha Rakta* (deoxygenated blood), resembles the venous system of body. There are various synonyms and terminology of *Sira* in our classics. Different *Acharyas* mentioned different synonyms which indicates the features of *Sira* like-

- A tubular composition like *Nadi*.
- Some have apertures like *Strotasa*.
- It having blood like *Dhamni*.
- Origin of *Sira* and *Snayu* is same.
- Few *Sira* are very fine.

Acharya described that the sense of any term or idea should be read in the terms of that context. In context of *Sira* the explanation of *Charaka* denotes the categorization of the empty tubular constitution of body. All the constitution of body which take away fluids to one to another part of body are termed as *Sira*. After that he describes that among these structure which flow the blood by pumping method (*Dhaman*) are termed as *Dhamni* and which work as a oozing process (*Stravana*) are termed as *Srotasa*. According to *Acharya Sushruta* the special features of the *Sira* is that they are naturally unstable and modified their location as a fish. It shows that *Sira* is most changeable structure in our body anatomically. In our circulatory system veins are much varying than arteries, which indicates that *Susruta* given explanation about the superficial veins.

CONCLUSION

The word *Sira* uses for passage or channels by which matter flow. Generally this word uses for blood vessels. *Sushruta* has used this term in the means of nerves (*Vatavaha*). In the modern Anatomy the *Vatavaha Siras* can be mentioned as the arteries and

nerves, The *Pittavaha Siras* can be correlated as the veins and *Kaphavaha Siras* can be correlated as the lymphatic pathway and *Raktavaha Siras* are considered as the capillaries of the body.

- Modern consideration of 4 kinds of *Siras* –
 - In *Vatavaha Siras* perceive the *Aruna Varna* (crimson red) colour and fill up by *Vayu* (pulsating property) character indicates that in Modern Anatomical science these characters of artery. If notice the work balancing the sense organs and intellect suggests recommended that in Modern pathy these work are normally done by nervous system.
 - In *Pittavaha Siras* perceive the *Neela Varna* (blue) colour, it shows that in Modern pathy vein's colour are blue because of convey deoxygenated blood.
 - In *Kaphavaha Siras* perceive the *Gora Varna* (white) colour, it shows that in Modern pathy lymphatic's colour is white because of convey clear fluid lymph.
 - In *Rakthavaha Siras* perceive the *Rohini* (red) colour and work as nourishes the *Dhatus*, it shows that in Modern pathy capillarie's colour is red and interchange the nutrients in tissue level.
- In *Ayurvedic* texts the nervous system did not mentioned but the work of the nervous system described by the blood vessels. *Vayu* which moves in blood vessels, responsible for the work of nervous system. So it shows that *Sushruta* involves the nervous web in the circulatory system. So the term *Sira* is considered with lymphatics and the blood vessels is not fanciful and doubtful.

REFERENCES

1. Srikantha Murthy K.R., Sushruta Samhita with English translation, Third edition, Varanasi ,Chaukhambha Orientalia Publishers, 2007, Volume-I:9 p.
2. Dr. Bramhanand Tripathi, charaka Samhita, sutrasthana, Reprint edition 2007, chaukhamba surbharti prakashan.
3. Ambika datta shastri, sushruta Samhita of sushruta, sharir sthan, chapter 7, 13th edition, chaukhamba Sanskrit Sansthan, 2004.
4. Yadavaji Trikamaji (editor), Charaka Samhita of Agnivesh, Elaborated by Charaka and Dradhabala with the Ayurveda - Dipika commentary of Chakrapanidutta, Viman Sthana, Strotasam Nidanam 5/9, chaukhamba Surbharti Prakashana, Varanaasi, Edition-2012, Page no. 251.
5. Yadavaji Trikamaji (editor), Sushruta Samhita of Sushruta with the Nibandhasangraha Commentary of Shri Dalhanacharya and the Nyayachandrika Panjika of Shri Gayadasacharya on Nidansthana: Edited by Vaidya Jadavji Trikamji Acharya: Sharir Sthana; Dhamnivyakranashariram 9/ 3. Chaukhamba Surbharti Prakashana, Varanasi, Edition: 2014, Page no- 383.
6. Yadavaji Trikamaji (editor), Charaka Samhita of Agnivesh, Elaborated by Charaka and Dradhabala with the Ayurveda-Dipika commentary of Chakrapanidutta, Sutra Sthana, Arthe-das-mahamuliya Adhyaya 30/12, chaukhamba Surbharti Prakashana, Varanaasi, Edition-2012, Page no. 185.
7. Yadavaji Trikamaji (editor), Sushruta Samhita of Sushruta with the Nibandhasangraha Commentary of Shri Dalhanacharya and the Nyayachandrika Panjika of Shri Gayadasacharya on Nidansthana: Edited by Vaidya Jadavji Trikamji Acharya: Sharir Sthana; Siravyadha vidhi Shariram slok 8/20. Chaukhamba Surbharti Prakashana, Varanasi, Edition: 2014, Page no- 383.
8. Srikantha Murthy K.R., Sushruta Samhita text with English translation, Third edition, Varanasi ,Chaukhambha Orientalia Publishers , 2007, Volume-I: 122 p.
9. Thatte D.G., Sushruta Samhita text with English translation, IInd edition, Varanasi, Chaukhambha Orientalia Publisher, 2007, Volume-III: 140 p.
10. D.G.Thatte, Sushruta Samhita text with English translation, IInd edition, Varanasi, Chaukhambha Orientalia Publisher, 2007, Volume-III: 140 p.
11. Chaurasia B.D., Handbook of General Anatomy, IIIrd edition, New Delhi, CBS Publishers, 2000, 81 p
12. Thatte D.G., Sharira Rachana Vigyan, IInd edition, Varanasi, Chaukhambha Sanskrit Series Office,2008, 264 p.
13. Sharma P.V, Sushruta Samhita text with English translation and Dalhana's commentary, Reprinted edition, Varanasi, Chaukhambha Visvabharathi Publisher, 2005, Volume-II: 200 p
14. Gananath Sen Saraswathi, Sanjna Pancake Vimarsha, Reprinted edition, Varanasi, Krishnadas Academy Publishers, 1993, 67 p.
15. Yadavaji Trikamaji (editor), Charaka Samhita of Agnivesh, Elaborated by Charaka and Dradhabala with the Ayurveda - Dipika commentary of Chakrapanidutta, Sutra Sthana, Aatreya bhadrakapiya Adhyaya 26/37, chaukhamba Surbharti Prakashana, Varanaasi, Edition-2012, Page no. 142.
16. Moore, Keith L., Introduction to clinically Oriented Anatomy. In: Moore, Keith L (ed.) Moore Clinically Oriented Anatomy. New Delhi: Wolter Kluwer (India) PvtLtd; 2014. p. 41.

Corresponding author- Dr. Jyoti gangwal

M.D. Scholar, Dept. of Sharir Rachana, NIA, Jaipur.