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Critical Analysis of Srota: A Literature Review

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ABSTRACT:

Human body is nothing but a combination or aggregation of innumerable *srota*, which means minute individual channels. The word *srota* etymologically derived from the Sanskrit root “*sru-srabane*” *dhatu* which means oozing, permeation, filtration, to flow, exudation, to move etc. *Sira, dhamani, marga, rasayani, nadi, pantha, sharir chidra, samvrita-asambrita,sthana, aashaya, niketa, sharir dhatu avakasha, lakshya- alakshya* – all these words are synonymous to *srota*. Some of the *srota* are visible but some are minute so invisible. This *srota* or internal transport system has been given a place of basic importance in Ayurveda. According to Charak Samhita, in the human body there is no structure which can originate or synthesize, develop, persist and be wasted or atrophied without *srota*. This *srotas* continuously transport *dhatu*s for deposition or transformation. Again there are *dosha-vaha srotas*. Any type of disease occur due to abnormality in *srotas* and there are some sign and symptoms due to specific type of *srotadushti*. But still we do not have a clear understanding about *srota* in perspective of modern medical science. So in this article we tried to find out way for better understanding about *srota*.

Keywords: *Srota, dhatu, dosha-vaha srota, srotadushti*

INTRODUCTION

Human being or *purush* is composed of two components, one is *panchabhoutik sharir* and other is *shariri* or *atma*.¹ The component of *atma* is responsible for giving life. Another component *sharir* is a physical one which is made up of *panchamahabhuta* and has a shape.² This *sharir* is again composed of innumerable *murtiman bhava* that means physical entities. All these innumerable physical entities have their respective *srota*.³ In human body there is no such physical entity which can be originated, can persist or can be destroyed without *srota*. *Srotas* are responsible for transportation and transformation of *dhatu* that means body components. So human body is fully

composed of *srotas*. Some of these *srotas* are visible (*sthulasrota*) but some others are invisible (*anusrota*). Acharya Charaka has described about 13 types of *srotas* like – *pranavaha, udakavaha, annavaha, rasavaha, raktavaha, mamsavaha, asthivaha, majjavaha, shukravaha, purishvaha, mutravaha, swedavaha* and another one *artavavaha srotas*. Other than these *srotas* there are *dosavaha srotas* also for *vata, pitta, kapha* dosa accordingly.

From dictionary meaning of the word *srota*, we get - a current, a stream, a river. Again, from *panchabhoutik* composition, *srotas* have predominance of *aakash mahabhuta* in them. So they have qualities like patency,



porosity, cleanliness, softness, slightly unctuous, minuteness, colorlessness and transparency.⁴ Again there is a structure named *kala* which is located between *dhatu* and *aashaya*.⁵ These *kalas* act as membrane (semi-permeable membrane). They allow selected substances to pass through them. There are seven *kalas* for seven *dhatu*s respectively. Acharya Susruta has mentioned 11 pairs of *srotas*. For better understanding there are synonyms of *srota* mentioned in Charak Samhita⁶-

Srotamsi (channels)

Sira (veins)

Dhamani (arteries)

Rasayani (lymphatics, ducts)

Rasavahini (capillaries)

Nadi (tubular conduits)

Panthan (passage)

Marga (pathways, tracts)

Sharirchhodrani (body orifices, opening, cavities)

Samvrita-asamvrita (open or blind passages)

Sthanani (sites, locus)

Ashaya (repertoires)

Niketa (resorts)

Though all of these above-mentioned entities are defined and indicated for a common function of conveyance of material, the purpose of each seems to be different.⁷

AIM AND OBJECTIVES

1. To understand concept of *srotas* in detail by review of literature.
2. To get knowledge of function of *srotas*.
3. To get relation between *srota* and *srotamula*.
4. To understand clinical significance of Dr in genesis of disease.

MATERIAL AND METHOD

The study was planned on conceptual basis using its literary study of classical and modern texts. After a comparative study the logical thinking was applied to conclude the main points of study and for those major approaches of literary study involved –

- a) Compilation of literatures related to *srotas* according to various Ayurvedic classics, commentaries and research work.
- b) Comparison of *srotas* with capillary system of body and interpretation with respect to biochemistry and biophysics and metabolism of the body.
- c) The *Laghutrayee*, *Brihatrayee* literatures.

- d) Commentaries on Samhita Granthas were studied for compilation of study.

Review of literature:

Origination of *srotas*

Srota utpatti happens in intra- uterine life. Genesis or formation of *srota* occurs due to *vayumahabhuta*. With the help of appropriate *agni* there is differentiation due to *vayumahabhuta* in the *garbha* and as a result there is genesis or formation of *srota* in the *garbha*.⁸

In this way during the intrauterine life, due to differentiation of fertilized zygote *sthula srotas* are created and in those *srotas* various body entities take their origination. Again, there is differentiation of various physiological processes which lead to genesis or origination of *anusrotas*.

Form of *srotas* :

According to Charak Samhita color of *srotas* are same as the respective *dhatu*. They are circular in shape, large as well as small in size, large in length and reticular in structure.⁹

According to Sushruta Samhita structure of all *srotas* are like radiating from the root or *mula* throughout the body.¹⁰

Types of *srotas* :

According to Acharya Chakrapani “*Srotamayam hi shariram*” that means as human body contains innumerable *srotas* it is the cluster of *srotas*.

According to Acharya Charaka there are *srotas* for every *murtimanata bhava* in the human body. Among them specifically he has mentioned about 13 *srotas* as they play major role in maintaining body physiology and clinical perspective also.

Acharya Sushruta has mentioned about 11 pairs of *srotas* and in another chapter he has mentioned that there are 9 *srotas* in male body – in mouth, rectum urethra, two in eyes, two in ears and two in nose and along with these there are 3 more *srotas* in female body – two in breasts and one in vagina. Other than these visible *srotas* there are internal *srotas* for prana , *anna*, *udak*, seven *dhatu*s and three *malas*.

According to Acharya Kashyapa *srotas* are of two types – *sukshma* and *mahan*. He has described *nabhi* and *romakupa* as *sukshma srota*. While *mahan srotas* are present in head region according to him¹¹

Importance of *srotas* :

From literary study based on various Ayurvedic texts we found that *srotas* are essential to perform various vital functions. Such as –

1. To excrete the waste materials (*mala*) from the body.
2. Transport vital supports to the body (*prana*, *anna*, *udaka*).

3. *Dosa (sharir, manas), dhatu, upadhatu, prana, anna, udaka, mala and prasad bhaga* of *dhatu*s – all are transported to the specific required parts in the body with the help of *srotas*.
4. *Srotas* also carry sensory and motor impulses throughout the body.
5. *Mana* in *chetan sharir* is transported by the *srotas*.
6. All body elements or physical entities are synthesized through *srotas*. They persist or develop with the help of *srotas* and after all when they are destroyed or atrophied they get removed from the body through *srotas* or transformed into another physical entities through *srotas*.

Physiological aspect of *srotas* :

The *srotas* are energy driven channels within the body and are responsible for carrying out all body functions. *Srotas* are compared as little rivers with continuous flow of *bhavas* within the body, doing nourishment and transportation in the body. It is essential to understand the functions of *srotas* according to the physiological condition.

All the seven *dhatu*s are synthesized by *srotas* and these are responsible for –

- 1) Receiving nutrients from *aahara rasa* and nourishing all the seven *dhatu*s.
- 2) Maintaining pH, temperature, electrolyte balance and hence regulating neurotransmitter secretions & maintaining hormone balance.
- 3) Shifting of body entities to their respective place of density (from their place of origination) after biotransformation.¹²

Clinical importance of *srotas* :

Acharya Charaka has explained the *dusti* or abnormality in *srotas*. There are four types of abnormalities or *khavaigunya* (impairment of function of *srotas* due to abnormality of the site of biochemical reactions in the *srotas*). They are as follows –

- *Atipravritti*- excessive flow or fastness of reactions. Example- *Atisweda, Atisara*.
- *Sanga*- retention or obstruction in biochemical reactions. Example- *Mutraghat*.
- *Siragranthi*- dilatation of vessels due to retention or deposition of certain physiological entities. Example- *Arsha*
- *Vimargagaman*- due to some pathology at the level of *srotas* there is flow of certain physiological entity through another channels except its own or synthesis of another

product/ byproducts in place of certain expected entity. Example- *Raktapitta*.

Srota and srotamula :

Literary study of Charak Samhita suggests the following concepts related to *srota* and *srotamula*.

- *Pranavaha srota*- *mula - hridaya* and *mahasrota*. Dysfunction may cause frequent respiration, lack of breath or pain during breathing.
 - *Udakavaha srota*- *mula- talu* and *kloma*. Dysfunction may cause dryness of tongue, palate, lips, throat and excessive thirst.
 - *Annavaaha srota*- *mula- aamashaya* and *vamaparshva*. Dysfunction may cause anorexia, indigestion, vomiting.
 - *Rasavaaha srota*- *mula- hridaya* and *dhamanis*. Dysfunction may cause anorexia, nausea, heaviness, drowsiness, fever.
 - *Raktavaaha srota*- *mula- yakrit* and *pleeha*. Dysfunction may cause various skin diseases, bleeding disorder.
 - *Mamsavaaha srota*- *mula- snayu* and *tvak*. Dysfunction may cause *adhimamsa, arbuda, galashindika* and *putimamsa*.
 - *Medovaha srota*- *mula- vrikka* and *vapavaha*. Dysfunction may cause prodromal stage of *prameha*.
 - *Asthivaha srota*- *mula – meda* and *jaghana*. Dysfunction may cause *adhyasthi, adhidanta, asthibheda* and *asthishula*.
 - *Majjavaha srota*- *mula- asthi* and *sandhi*. Dysfunction may cause joint pain, fainting.
 - *Shukravaha srota*- *mula – vrishan* and *shepha*. Dysfunction may cause impotency, erectile dysfunctions.
 - *Mutravaha srota*- *mula- basti* and *vankshana*. Dysfunction may cause excessive excretion, obstruction, burning micturition.
 - *Purishvaha srota*- *mula- pakwashaya* and *sthulaguda*. Dysfunction may cause constipation, burning sensation during defecation, abnormality in consistency of stool.
 - *Swedavaha srota*- *mula- meda* and *romakupa*. Dysfunction may cause excessive sweating, lack of sweating, burning sensation.¹³
- Again, literary study of Sushruta Samhita suggests the following concepts
- *Pranavaha srota*- *mula- hridaya* and *rasavahini*. Injury may cause tremors, vertigo, illusion or even death.
 - *Annavaaha srota*- *mula- aamashaya* and *annavahini dhamani*. Injury may cause abdominal distension, pain, anorexia, vomiting, thirst even death.
 - *Udakavaha srota*- *mula- taalu* and *kloma*. Injury may cause thirst and instant death.

- **Rasavaha srota-** mula- hridaya and rasavahini dhamani. Injury may cause cachexia , death.
- **Raktavaha srota-** mula- yakrit and pleeha and raktavahini dhamani. Injury may cause blackish or bluish discoloration of body, fever, burning sensation, anaemia or redness of eyes.
- **Mamsavaha srota-** mula- snayu ,tvacha and raktavaha dhamani. Injury may cause swelling or muscular distrophy or death.
- **Medovaha srota-** mula- kati, vrikka. Injury may cause sweating thirst etc.
- **Mutravaha srota** – mula- basti and medhra. Injury may cause obstruction of urine formation and micturition.
- **Purishvaha srota-** mula- pakwashaya and sthulaguda. Injury may cause painful distension of abdomen, bad smell in stool.
- **Shukravaha srota-** mula- stana and vrishan. Injury may cause impotence, delayed erection and ejaculation.¹⁴

DISCUSSION

Srotas are the internal transport system of the body. So it has been given a place of basic importance in Ayurveda – both in healthy and diseased conditions. There is no such physical entity which can be generated, developed and persisted or destroyed without the help of *srotas*. All the seven *dhatu*s are synthesized and transformed constantly through their respective *srotas*. The *srotas* sub- serve the needs of transformation. In surgery related texts more emphasis is given on visible *srotas* in manifestation of diseases. While in medicine related texts emphasis is also given on invisible *srotas* in synthesis of *dhatu*s and manifestation of diseases.

CONCLUSION

This article emphasized on proper understanding of concept of *srotas* in a systematic way. Proper understanding of the functions of *srotas* according to their *srotomula* with respect to the physiological entities is discussed. Different types of *srotadushti* is explained. The role of *srotas* in manifestation of any disease is discussed very well in almost all Ayurvedic texts. An Ayurvedic physician should have a complete knowledge of *srotas*, to approach to a patient in a holistic way as no disease can manifest without *srotodusti*.

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