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Research Article

Ayurveda Literary Research Study on Some Important Aspects of Srotas

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ABSTRACT

The ancient medical science of India; Ayurveda considered *Srotas* as an important structural and functions entity of human body. The *Hira*, *Antreshu*, *Gavinyau*, *Dhamani*, *Srotiyah*, *Panth*, *Khani*, *Srawanti*, *Nadi* and *Dwar* are considered as *Srotas* or they together form *Srotas*. *Akashaa Mahabhut* is mainly involves in the constitution of *Srotas*. *Srotas* play significant role in the circulation and transportation of various materials. Different studies have been conducted on *Srotas*, but still there is more to explore in this regards; considering this fact present investigation was planned to conduct more deep study related to ayurveda perspective of *Srotas*. The article presented critical study of *Srotas* with special reference to microcirculation in a view to explore all dimensions of micro channels. The study described various concepts related to nature, structure, functions and development of the *Srotas*.

Keywords: Ayurveda, Srotas, micro channels, transportation.

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INTRODUCTION

The *Srotas* are micro channels perform circulatory process in human body, they circulates *Prana*, *Anna*, *Jala*, *Dhatu*s and *Malas* which undergoing process of transformation. *Srotasmsi*, *Sira*, *Dhamanis*, *Rasayanya*, *Rasavahinya*, *Nadya*, *Samvrita-asamvrita* and *Panthan* are considered as parts of *Srotas* which perform function of transportation. *Srotas* not only involve in passive transportation but also involve in active process. Diffusion, osmosis and filtration are the processes utilized by various *Srotas*. *Srotas* transports oxygen through *Pranavaha Srotas*, water through *Udakavaha Srotas*, red blood cells through *Raktavaha Srotas* and urine through *Mutravaha Srotas*¹⁻⁵. *Pranavaha Srotas* transports *Pranavayu* from lungs to each body cell through diffusion. *Annavaha Srotas* transport nutrient to various tissues of body through diffusion and active process. The *Rasa* as a *Dhatu* circulated through the vessels using filtration and absorption process²⁻⁴. The *Raktavaha Srotas* transports *Rakta* separated from

lymphatic system. *Mamsavaha Srotas* bears load of physical substance termed as *Mamsa*³⁻⁷.

Aim & Objectives

1. To present more clear vision of *Srotas*.
2. To determine *Srotas* with reference to *Ayan-Mukha*.
3. To clarify *Srawana Kriya* with reference to biophysical phenomena.
4. To present relation between *Srotas* and *Srotomula*.

MATERIAL & METHOD

The study was planned on conceptual basis using literary study of classical and modern texts. After a comparative study the logical approach was applied to conclude the main points of study. The major approaches of literary study involve followings considerations:

1. To compilation of literatures related to *Srotas* according to various Ayurvedic classics, commentaries and research work.
2. The *Srotas* were compared with capillary system of body and interpreted with respect to biophysics, biochemistry and metabolism of the body.

The *Laghutrayi*, *Brahattrayi* and other literatures were used for study after considering facts of *Vedas*. *Samhita-Granthas*, commentaries and literature served by various ancient *Acharya's* (*Vagbhata*) etc. were studied for the compilation of study. *Acharyas* mainly classified *Srotasas* into *Bahya Srotas* and *Antah Srotasas*. *Acharya Sushrut* also described *Artavavaha Srotas* but not by *Charak* and *Vagbhata*⁴⁻⁸.

Conclusion of Literary Study on Terms and definition:

The definition of *Srotas* examined through multifold factors like; synonyms, structure, morphology, function and importance of *Srotas*. The term *Srotas* concluded for structure spreading in entire body for openings such as; *Sira*, *Dhamani* and *Rasavahini*, etc. *Ayanmukha*, *Ayan*, *Chhidra*, *Marga*, *Nadi*, *Sthana*, *Ashaya* and *Niketa* are also similar structures considered as *Srotas*. As per *Vagbhata* the fine passages or pores resembles *Srotasas*. *Sharnghdar* and *Bhavamishra* described that physiological entity which transports *Prana*, *Anna*, *Jala* and *Mala* etc. in body are termed as *Srotas*.

The term for specific *Srotas* involve use of *Vaha* such as; *Pranavaha*, *Annavaha* and *Udakavaha* etc. *Vaha* means carrying material from one place to another place.

Conclusion of Literary Study on Differentiation of Srotas:

The *Srotas* may be differentiated on the basis of some facts such as;

- ❖ Difference between signs of *Srotas*
- ❖ Difference between attachment and origins
- ❖ Difference through functions
- ❖ Difference from *Dhamani* and *Sira*

Conclusion of Literary Study on Morphology of Srotas:

The study concluded that *Srotasas* have their colour similar to that of the *Dhatu* transported through it. Morphologically *Srotasas* appear with colour of the substance which transported by them, *Srotasas* may be *Anu* size/microscopic or may be macroscopic; *Sthula*. The network of *Srotas* look likes *Pratana*-reticulated in shape.

Present study concluded that as per *Sushrut Srotasas* are slightly different from *Siras* and *Dhamanis* which may otherwise resemble them. *Vagbhata* compared *Srotas* with fine pores present in the lotus stem. Invisible *Srotasas* are innumerable may be cylindrical, long or straight.

Conclusion of Literary Study on Importance of Srotas:

The literary study based on various ayurveda texts concluded that *Srotas* are essential to perform various vital functions such as:

1. To excrete the waste materials (*Malas*) from the body.
2. Transported vital breath to the organs.
3. *Doshas*, *Dhatus*, *Updhatus*, *Prana*, *Anna*, *Udaka*, *Malakhya* and *Prasadakhya Dhatus* are transported in the body with the help of *Srotas*.
4. *Srotas* also carry sensory and motor impulses throughout the body.
5. *Mana* in *Chetan Sharir* also transported by the *Srotas*.

Conclusion of Literary Study on Types of Srotas:

The *Vagbhata* described that there is *Srotas* in mouth, rectum and urethra; two in eyes, ear, and nose in male while female has three more *Srotas*; two in breasts and one in vagina. The other internal *Srotas* are *Prana*, *Anna*, *Udaka*, *Dhatus* and *Malas*. *Kashyapa* described that *Srotas* are of two types; *Sukshma* and *Mahan*, *Nabhi* and *Romakoopa* as *Sukshma* while *Mahan Srotas* mainly present in head region⁷⁻¹³. As per this study the major classification of *Srotas* are as follows:

Table 1: Specific Srotas and their functions:

S. No.	Srotas	Specific functions
1	<i>Pranavaha Srotas</i>	Channels for respiration
2	<i>Udakavaha Srotas</i>	Channels for water distribution
3	<i>Rasavaha Srotas</i>	Lymphatic transportation system
4	<i>Raktavaha Srotas</i>	Vascular transportation system
5	<i>Mutravaha Srotas</i>	Channels through which urine transported
6	<i>Swedavaha Srotas</i>	Channels for sweat transportation
7	<i>Purishavaha Srotas</i>	Channels for feces transportation



Figure 1: Srotas indicating organs in the body.

Conclusion of Literary Study on Srotodushti:

The study revealed that various diseases may arise due to the malfunctioning of Srotas. Disease such as; *Atipravritti* (excessive flow), *Sanga* (retention or holding up), *Siragranthi* (dilatation of veins) and *Vimarga Gamana* (deviated flow of fluids) may occur due to the Srotas Dushti. The literary study concluded that pathological alteration in *Rachana* of the microstructure leads to obstruction or transportation of *dushti-vaha* resulting in pathogenesis of disease progression.

Conclusion of Literary Study on Function of Srotas:

1. The study believes that structural entities mainly originated from Srotas.
2. The normal functioning of Srotas keeps the body free from disease.
3. Srotas carry Dhatus to their destination.
4. Srotas nourish the body to prevent structural diminishment.
5. Development and nourishment of Bhavas require proper functioning of Srotas.
6. The study also concluded that improper functioning of Srotas may lead to the following pathological conditions specifically such as; the transportation of vitiated *dushti/dosha* from nasal to ear may cause pain and deafness. The transportation of vitiated *dosha* to the sinuses may cause headache. *Atisar* may occur if *dushti* is transported by *Mahasrotas*¹⁵⁻²².

OTHER MAJOR FINDINGS OF STUDY (CONCLUSIVE DESCRIPTIONS)

The compilation of literary study suggests the following major findings related to Srotas:

- ❖ **Pranavaha Srotas** originated from *Hridaya* and *MahaSrotas*, the dysfunction may lead to frequent respiration, lack of breath and pain.
- ❖ **Udakavaha Srotas** originated from *Talu* and *Kloma*, the dysfunction may lead to dryness of tongue, lips, throat and excessive thirst.
- ❖ **Annavaaha Srotas** spread throughout *Amashaya* and *Vamaparshva*, the dysfunction may lead to anorexia, indigestion and vomiting.
- ❖ **Rasavaha Srotas** placed through *Hridaya* and *Dhamanis*, the dysfunction may lead to anorexia, nausea, heaviness, drowsiness and fever.
- ❖ **Raktavaha Srotas** originated through *Yakrit* and *Pleeha*, the disease associated with *dushti Rakta* are *Kustha*, *Visarpa*, *Raktapitta* and *Asrakdar*.
- ❖ **Mamsavaha Srotas** associated with *Snayu* and *Twacha*, the disturbed functioning may cause *Adhimamsa*, *Arbuda*, *Galashundika* and *Putimamsa*.
- ❖ **Medovaha Srotas** originated from *Vrikka* and *Vapavahana*, dysfunction may lead to *Prameha*.
- ❖ **Asthivaha Srotas** associated with *Meda* and *Jaghana Pradesha*, the improper transportation and functioning may result in *Adhyasthi*, *Adhidanta*, *Bheda* and *Asthisula*.
- ❖ **Majjavaha Srotas** are with *Asthi* and *Sandhi*, the disturbance may result in joint pain, fainting and morbid affection of *Majja*.
- ❖ **Shukravaha Srotas** related to *Vrishan* and *Shepha*, the morbidity of *Sukra* causes impotency, erectile dysfunctions, loss of lust and weakness.
- ❖ **Mutravaha Srotas** initiated from *Basti* and *Vankshana*, the disturbance in this Srotas leads to excessive excretion, obstruction or suppression, vitiated urination and burning sensation.
- ❖ **Purishavaha Srotas** originated from *Pakwashaya* and *Sthul Guda*, symptoms of their morbidity resulted in difficulty in defecation, pain, defecation with burning sensation and deteriorated consistency of *Purisha*.

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