



REVIEW ON CONCEPT OF SROTAS WITH SPECIAL REFERENCE TO CLINICAL PERSPECTIVE

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ABSTRACT

Ayurvedic clinical foundation is based on thorough knowledge of it. Srotas (channels) are the Channels that convey the body elements, which are undergoing metabolic processes, sub serve the purpose of circulation. The vitiation, depletion and maintenance of existed bodily structures are never possible without Srotas. The Srotas are that channels by which conduction of the respective nutrients to their respective destinations is possible. After that only that specific organ gets the pacification or depletion. Hence any organ cannot be maintained or can't get vitiated without Srotas so there is a need to study the fundamental and applied aspect of Srotas in order to understand Ayurvedic biology and disease processes in depth.

Keywords: *Ayurveda, Ayurvedic Biology, Srotas, inner transport system.*

INTRODUCTION

Ayurveda (Ayu=life+Veda=science) is the most ancient science of Life, Health and cure. It makes a unique holistic approach to the life and its wellbeing. Ayurvedic biology since the times of *Samhitas* is practiced in terms of the concepts of Tridosha (*Vata, Pitta, and Kapha*), *Sapta Dhatus, the Ojas and Ojas Bala, Agni, Agnibala and Srotas*. The role of Srotas in the manifestation of disease is well discussed in almost all Ayurvedic texts, so also its importance in the maintenance of normal physiological functions that is the basis for good health. A complete knowledge of *Srotas* is a must for an Ayurvedic physician to approach a patient in a holistic way. Manifestation of a disease occurs in the body as a result of the defective *Srotas* of the body. Hence, any defect of Srotas must be corrected quickly, for the restoration of normal health. It is the pre-requisite for the maintenance of good health because without healthy Srotas body cannot grow normally. Any slight disturbance at the level of Srotas, either structurally or functionally, leads to *Sammurachana of Dosha and Dushya* and as a result disease manifests inside the body. Competent *Srotas* is the root cause for a healthy body. *Samshodhan therapy* is recommended for removing the existing *Malas* from the body and thereby maintains the healthy status of Srotas. Vata, Pitta, and Kapha move through the Srotas all the channels of the body cater the needs for these movements. So as long as these channels of circulation perform their normal functions, body would be free from diseases. In the present context, we

are especially concerned with the *Srotovijnana* of Ayurveda and hence in coming paragraphs we shall limit our discussions to the concept of *Srotas* in Ayurveda.

The word Srotas is derived from the Sanskrit root-“Sru-gatau”(Sru+tasi= Srotas)which means going, moving, continuing, filtering, flowing, leaking, secreting etc. As per Acharya Charak
“*Srotamsi Khalu Parinamamapadyamananam dhatunamabhibahini bhabantyaayanarthena*”

It means the channels of circulation carry the *dhatu*s (tissue elements or their constituents) undergoing transformation to their destination. The term “*Parinamamapadyamananam*” indicates that the channels carry such of the tissue elements as are undergoing transformation from their previous states; viz. *rasa* (plasma) to their subsequent states; viz. *rakta* (blood) etc. *Ayanarthena*” indicates that the channels of circulation do not carry the *sthira* (stable) *dhatu*s, but, only such of the mobile *dhatu*s, as are destined to be transformed to another *dhatu* situated elsewhere, are carried by them. In common practice *Srotas* is defined as “*Sravanata Srotamsi*” ... “*Yavantah Purushe Murtimanto Bhavavisheshah Tavantevasmin Srotasam Prakara Visheshah*” Means the *Srotamsi* are innumerable. Body-mind-spirit system has as many *Srotamsi* as are the number of life factors operating in the life process.⁽¹⁾

Synonyms – *Sira* (vein), *Dhamani* (artery), *Rasayani* (lymphatic ducts), *Rasavahini* (capillary), *Nadi* (tubular conduits), *Panthana* (passages), *Marga* (pathways, tracts), *Sharirachidra* (body orifices), *Samvritasamritani* (open or blind passages), *Sthana* (sites), *Ashaya* (repertories), and *Niketa* (resorts) are the synonyms of *Srotas* (channels).⁽²⁾

CLASSIFICATION OF SROTAS

Suksma (subtle) - Innumerable – Body-mind-spirit system has as many as *srotamsi* as are the number of life factors Operating in the life process. *Sthula* (gross) – Numerable - *Bahirmukha* (Aperture or Natural opening)- 9 in male, 11 in females, *Antarmukha* – 13^(3,4).

CHARACTERISTICS OF SROTAS

Colour- Colour of *Srotas* is similar to that of *dhatu* they carry.

Size- *Anu* (atomic in size or microscopic), *Sthula* (Gross or macroscopic),

Shape- *Vritta* (cylindrical), *Dirgha* (long), *Pratana* (reticulated)

STRUCTURE:

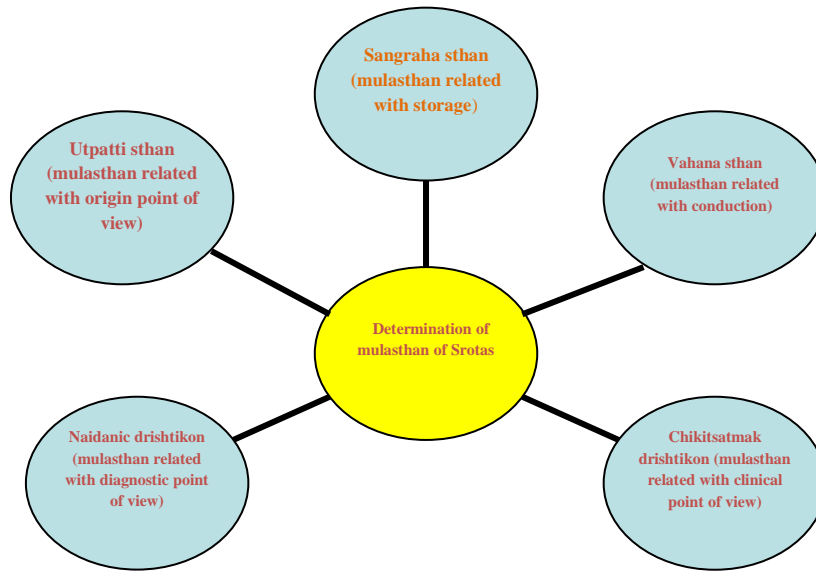
Acharya Charaka has explained that the body parts can be divided and re-divided into innumerable individual components called *Parmanus*. These are innumerable because of their huge number, highly minute structure and limited perceptive ability of sense organs⁽⁵⁾

This statement indicates that there existed a concept of minute and numerous individual living units in the body. Today we call such microscopic units by the name 'Cell'. 'Anu Srotas' is another such very similar term, probably indicative of a

cell. Some of our *Samhitas* even clearly mentioned the view that the living body is nothing but the resultant of aggregation of such innumerable 'Srotamsi'. 'Srotāmsi' is the plural form of 'Srotas'. The term 'Srotas' means an individual 'Cell' - 'Anu Srotas' and also an individual 'Organ System' 'Sthūla Srotas'. A tissue is a group of structurally and functionally similar cells. 'Srotāmsi' are structurally similar to their corresponding tissues. Also, each 'Srotas' is functionally (Metabolically) related to its corresponding tissue. The orifices of the *Srotas* are very small, wide, long and far, like those in the lotus stalk; through them, *Rasa* 'nourishes' the body. The colour and form of the *Srotas* would be similar to the *Dhatu* they transport; they may be cylindrical, either *Sthula* (gross, macroscopic) or *Anu* (atomic or microscopic), *Dirgha* (long), or *Prathana* (reticulated).⁽⁶⁾

MULAM OF SROTAS

Chakrapani has described *Mulam* as- "Mulamiti Prabhava Sthanam", meaning thereby that *Mula* of a *srotas* is the anatomical seat of the respective *srotas*, the main seat of the pathology of that channel, the principal seat of manifestation of disease. The cause of morbidity of *srotamsi* and their manifestation, pertaining diseases has also been explained. The set of channels is apparently described as the major seat of diseases which can be clinically examined in a patient by physician for diagnostic purposes.⁽⁷⁾ For the some points have been logically and categorically counted in the various classics. Such as



Among the above mentioned points some points are considered in combinations in some contexts and considered separately in some contexts to determine the source of *mulaasthan*. But the clinical stand point has been considered in all the cases of determinations of the *mulaasthan*.⁽⁸⁾

DISCUSSION:

There are three words in Ayurveda which are with interwoven meaning and functions useful for the common purpose of circulation *dhamani*, *sira* and *Srotas*. Leaving theory behind let us see the exact meaning and practical use of these words.

Dhamnyad dhamanyah -- that which beats (pulses) Dhamani (Artery)

Sarnat Shirah -- that which moves Sira (Vein)

Sravanat srotamsi--- that which secretes Srotas (Capillary).

Dhamanis and *Siras* are for macro circulation of blood and *Srotas* is meant for micro circulation, *Chakrapani* has explained that *Sravanat* means *Sravanam* of *rasadi poshya dhatu*. The term *Srotas* means channels or systems in which some tissue is formed; some material is metabolized, secreted or transported. Charak has described that *Srotamsi* are channels which transport the *dhatu* (*asthaya* or *poshya dhatu*) which are subjected to transformation. When *Srotas* is damaged (got *dusti*) there is manifestation of disease hence *Srotas* is essential parameter in understanding the disease.

Charaka and *Sushruta* made different classification of *Srotas* according to their field of thoughts, *Kayachikitsa* and *Shalya Chikitsa* aspect respectively. Finally *Srotas* is a transport system which receives all exogenous substances in the body, transform into endogenous to yield energy and nutrition, and takes out by-products

(malas, excreta) of through sequential process. With this meaning Srotas can be classified in to two *Sthula Srotas* & *Sukshma Srotas*, *Sthula Srotas* again divided into two *Bahirmukha Srotas* (Aperture or natural opening)

Yogwaha Srotas (internal passage) *Acharya Charaka* has described thirteen

Table no.1

Srotas	Mula	Categorization as in modern medical system
<i>Pranavaha</i>	<i>Hridaya, Mahasrotas</i>	Channels of respirations
<i>Udakavaha</i>	<i>Talu and kloma</i>	Channels of fluid distribution
<i>Annavaha</i>	<i>Amashaya and vama parshwa</i>	Alimentary canal
<i>Rasavaha</i>	<i>Hridaya and dasa dhamani</i>	Lymphatic system
<i>Raktavaha</i>	<i>Yakrit and pliha, raktavahi dhamani</i>	Vascular system
<i>Mamsavaha</i>	<i>Snayu and twak, raktavahi dhamani</i>	Channels of nutrition to muscle tissue transport
<i>Medovaha</i>	<i>Vrikka and vapavahan</i>	Nutritive channel for adipose tissue
<i>Asthivaha</i>	<i>Medomul and jaghan</i>	Nutritive channel for bone tissue
<i>Majjavaha</i>	<i>Asthi and sandhi</i>	Nutritive channel for bone marrow
<i>Shukravaha</i>	<i>Vrishan and sheph, stan also considered</i>	Nutritive channel for reproductive tissue
<i>Mutravaha</i>	<i>Basti and vankshan</i>	Channels of transporting urine
<i>Purishvaha</i>	<i>Pakvashaya and sthulaguda</i>	Channels of transporting sweat
<i>Svedavaha</i>	<i>Medomul and lomkup</i>	Channels of transporting faeces
<i>Artavavaha</i>	<i>Garbhasaya and artavavahi dhamani</i>	Nutritive and transporting channel for uterine system

As discussed earlier under *Srotas Pariksha*, interpreting the concept of Srotas system with the concept of system-wise description of modern medical studies is to be highly impossible.

major gross *srotamsi* simulating the major physiological systems of the body as known in conventional modern system of medicine. *Sthula Srotas* along with their *mulam* have been described for the purpose of the study of pathology and clinical medicine.

However an attempt is made to clarify the Srotas obviously, for the purpose of clinical examination and study to help for amassing to a diagnosis and plan of treatment.

Charak enumerated commonly occurring pathological or organic damage of Srotas i.e. *khavaigunya* they are *Atipravritti* (an excessive flow), *Sanga* (retention or holding up), *Sira granthi* (dilatation veins

or varicose veins), *Vimarg gaman* (flow of content through other channels)

To understand the above phenomenon of *Srotodusti* goes through the following examples-

Atipravritti-excessive flow-increased flow of the content in excess to its normalcy e.g

<i>Annavaaha Srotoatipravritti</i> - excessive flow of acid to stomach	<i>Amlapitta</i>
<i>Artavaaha Srotoatipravritti</i> - excessive flow of rakta or artava	<i>Raktapradara</i>
<i>Mutravaaha Srotoatipravritti</i> - excessive flow of urine	<i>Bhumutrata or Prameha</i>
<i>Purisvaaha Srotoatipravritti</i> - excessive flow of feces	<i>Atisara</i>

Sanga means obstruction causing in different way

Intra luminal obstruction	<i>Baddha gudodara</i>
Extra luminal obstruction	Any tumors /growths causing obstruction of Srotas externally

Siragranthi means dilated mutilated vessels causing stoppage of flow of blood through it due to *volvulus* e.g varicose veins

Vimarg gamana causes pathogenesis in two aspects-

- Content of Srotas moving into other Srotas – on cerebral haemorrhage blood comes out of the vessel and enter into CSF. – since it is other place it cause irritation to the cerebrum resulting in disease.
- Deprive of the nutrition to its own tissue -- In haemorrhage when blood comes out of the vessel, the proper tissue which has to get blood supply will not have nutrition resulting in loss of function e.g. hemiplegia , ischemia degeneration due to atrophy etc.

As modern medical literature of pathology, treatment and medicine is studied in term of system i.e. respiratory system means structural unit concerned with respiration similarly *Yogawaha Srotas* are also structural or functional unit in the body. Hence conveniently pathology and treatment can be studied basing on Srotas. Prof. R.H.SINGH describes that For the sake of simplification one could perceive the spectrum of *Srotas systems* below with the purpose of locating meeting grounds of the ancient and the contemporary understanding :⁽⁹⁾

- The whole body as a
- The whole body as a single channel.
 - Gross channels /systems of physiology.
 - Millions of micro tubular structures.

- Billions of cells and membrane potentials.
- Subcellular pathways.
- Receptor mechanisms and networks.
- Energetic and emotional pathways.
- The *Koshas*, *Chakras* and the *Nadis*.

CONCLUSION:

On the basis of above discussion it may be concluded that the basic requirements of Srotas are in transportation, most important is to Generate/increase or decrease the *Moortimant Bhava*. Thus structures can be called Srotas which transports *Moortimant Bhava* and produces new *Bhavas* or destroys the *bhava* of Body. The purpose of detail knowledge of Srotas is essential to understand the role of Srotas in the manifestation of diseases. Thus

Srotovijnana of Ayurveda, on one hand relates to gross pathology and cure while on the other hand it relates to the physiological functions which are the basis for good health. A complete knowledge of Srotas is a must for an Ayurvedic physician to approach a patient in a holistic way. Manifestation of a disease occurs in the body as a result of the defective Srotas of the body. Hence, any defect of Srotas must be corrected quickly.

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