



Srotas and Its Importance in Dhatu Formation – An Ayurvedic Review

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ABSTRACT

Ayurveda is an ancient science of life which not only gives importance to treatment of ailments but also puts weight on maintaining the health of individual. Ayurveda introduces various basic concept which is followed by Vaidhyato understand the human body. Concept like Panchmahabhut, Tridosha, Saptadhatu, Triguna, LokSamanya Siddhant, Agni, Mala, Ojas, Srotas, etc are basic pillar of ayurveda which help Vaidhyato understand human Shariraso that they can conquer the disease and maintain health of individuals. Among these Srotas also mentioned in Ayurveda. Srotas work as transportation system in body. It provides channel for Tridosha, Saptadhatu, Mala, etc. to perform their functions in the body. Srotas is network of channels in human body which is responsible for transportation, transformation, etc of important bio-factors like Tridosha, Saptadhatu, Mala, Anna, etc. Due to its important functions Srotas play important role in well-being of an individual. Similarly, it would be difficult to maintain health of individual if the Srotas are impaired. So, it is important to study the concept of Srotas to understand its function and its importance in causing ailment if impaired.

Keywords: Srotas, Dhatu, Srotomula, Poshyadhatu

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INTRODUCTION

Ayurveda is an ancient Indian system of medicine which is included of all the factors which are absolute or accessory in the determination of health. There are three factors described in Ayurveda which is considered as base of body, namely: *Dosha, Dhatu* and *Mala*. *Dosha* is functional unit. Whereas *Dhatu* are structural unit of human body. This is important for healthy state of body. As mentioned by Ayurvedacharya '*Dosha Dhatu Mala Mulam Hi Shariram*' there are seven *Dhatu* in the human body, increase or decrease of *Dhatu* in body leads to diseases. These *Dhatu* are *Rasa, Rakta, Mamsa, Meda, Asthi, Majja* and *Shukra*. The formation of each *Dhatu* takes place from the preceding *Dhatu* itself [1-2].

Srotas is defined as the channels which allows all the transportation in the human body. It is responsible factor for the movement of *Tridosha, Dhatu, Mala, Anna, Ojas* and *Mana* itself in all over body. According to Ayurved "*Srotomayam Hi Shariram*", this quote explains about living body which has inbuilt channel system spread throughout it which perform vital functions. These numerous channels work as inner transport system for various function, major and minute, biological and energetic. Hence, *Srotas* can be defined as the transportation system of human body responsible for providing platform for various activities which is important for entities like *Tridosha, Saptadhatva, Ojas, Agni*, etc [3-4].

AIM AND OBJECTIVES

- To understand about the concept of *Srotas*
- To understand about the concept of *Dhatu*
- To understand the function of *Srotas* in formation of *Dhatu*

MATERIALS AND METHODS

- Literature collected by referring different Ayurved Samhita and Samhita commentary.
- Papers published in research journals and various articles related to *Srotas* and *Dhatu*

REVIEW OF LITERATURE AND IT'S DISCUSSION

Srotas

Literal meaning of word 'Srotas' as given in many dictionary are- current, stream, river. The origin of word Srotasis derived from the language Sanskrit. The root word for Srotasis 'stru-strabane'. This root word has various meanings like - exudation, oozing, filtration, permeation, to flow, to move, etc. The term Srotasis used generically to describe all macro- and micro-channels and pathways that function in vivo. Charak defined it as *Sravanata Srotamsi*. This means the structure in which *Sravanam* arises. Chakrapani explained that *Sravanat* means his *Sravanam* of *Rasadi Poshya Dhatu*. The term slaughter means the channel or system in which tissue is formed. Some of the substances are metabolized, excreted, or transported. Charak explains that *Srotamsi* is a channel that carries the *Dhatu* (*Asthayior Poshya Dhatu*) he is in transformation. Both Acharya Sushruta and Vagbhata liken the *Srotas* to the very fine passages and pores of the lotus stem where the *Rasadi Poshya Dhatu* circulates throughout the body and nourishes the body [5-6].

Synonyms of Srotas:

Sira (vein), *Dhamani* (arteries), *Rasayani* (lymphatics), *Rasavahini* (capillaries), *Nadi* (Tubular conduits), *Pantha* (passages), *Sthana* (sites, locus), *Ashayas* (repositories), *Niketa* (resorts), *Marga* (pathways, tracts), *Samvrita-Asamvrita* (open or blind passages), *Sharir Chidra* (body orifices, openings) [7].

Structure of Srotas:

'*Moolat Khaadantaram Dehe Prasrutam Tu Abhivaahi Yat Srotaha Tat Iti Vigneyam Sira Dhamane Varjitam*' (Su. Sha. 9). As explained in quote above *Srotas* are located at all over the body, they are spread in whole body so they can function to transport and carry essential material in body [8].

'*Swa Dhatu Sama Varnani Vrutta Sthulani Anuni Cha Srotamasi Deerghani Akrutya Pratana Sadrushani Cha*' (Ch.Vi. 5/25). According to acharya Charak as quoted above the colour of *Srotas* is similar to the *Dhatu* or tissue which is that specific *Srotas* is carrying. The Size of *Srotas* as explained by acharya can be - *Anu* (atomic in size or microscopic), *Sthula* (Gross or macroscopic), Shape can be - *Vritta* (cylindrical), *Dirgha* (long) and *Pratana* (reticulated) [9].

Types of Srotas:

There are two types of *Srotas* as mentioned in Ayurveda. They are:

Bahir Mukha Srotas- These are the *Srotas* which have external openings.

Antar Mukha Srotas- These are the internal channels of body which do not have external opening [10-11].

Bahirmukha Srotas

There is total nine *Bahirmukha Srotas* located in human body according to Ayurved Acharya. There are seven *Bahirmukha Srotas* at upper body, 2 opening in nose (*Nasa*), two opening at ear (*Karna*), two opening at eyes (*Nayan*) and one opening at mouth (*Mukha*). Remaining two *Srotas* is located at lower body which are *Mehana* (penis) and *Apaanor Guda* (anal orifice). In females there are three additional *Bahirmukh Srotas* which includes two in *Stana* (breast) and one at *Garbha* (cervical opening). So, there are total 12 types of *Bahirmukh Srotas* in females.

Antarmukha Srotas

According to Acharya Charak there are total of thirteen *Antarmukha Srotas*, which are following :

1. *Pranvaha Srotas*
2. *Annavaha Srotas*
3. *Udakvaha Srotas*
4. *Rasavaha Srotas*
5. *Raktavaha Srotas*
6. *Mamsavaha Srotas*
7. *Medovaha Srotas*
8. *Asthivaha Srotas*
9. *Majjavaha Srotas*
10. *Sukravaha Srotas*
11. *Mutravaha Srotas*
12. *Purishvaha Srotas*
13. *Swedavaha Srotas*

According to Acharya Sushrut there are 11 *Antarmukh Srotas*. They did not consider *Asthivaha Srotas*, *Majjavaha Srotas* and *Swedavaha Srotas*. They added *Aartavavaha Srotas*.

In addition to these gross material channels another important channel is *Manovaha Srotas* which carries impulses of thoughts and emotions. *Sthula Srotas* along with their *Moolam* have been described for the purpose of the study of pathology and clinical medicine.

Moolam of Srotas: Chakrapani has described *Moolamas*- "*Moolamiti Prabhava Sthanam*". The above quote means that *Moola* 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.

Srotas and their *Moola Sthana* according *Ayurvedacharya*

No.	Name of <i>Srotas</i>	<i>Acharya Charaka</i>	<i>Acharya Suśruta</i>
1	<i>Prāṇvaha</i>	<i>Hṛdya, MahaSrotas</i>	<i>Hṛdya, RasvahiniDhamanī</i>
2	<i>Udakavaha</i>	<i>Tālu, Klom (oropharynx)</i>	<i>Tālu, Klom</i>
3	<i>Annavaha</i>	<i>Āmāśaya, Vamparshwa</i>	<i>Āmāśaya, AnnavahaDhamanī</i>
4	<i>Rasavaha</i>	<i>Hṛdya (Heart), Ten Dhamanī</i>	<i>Hṛdya, RasvahaDhamanī</i>
5	<i>Raktavaha</i>	<i>Yakṛt, Plīhā</i>	<i>Yakṛt, Plīhā, RaktvahaDhamanī</i>
6	<i>Māmsavaha</i>	<i>Twacha (Skin), Snāyu</i>	<i>Tvacā, Snāyu, RaktavahaDhamanī</i>
7	<i>Medovaha</i>	<i>Vṛkka, Vapavahan</i>	<i>Vṛkka, Kaṭī</i>
8	<i>Asthivaha</i>	<i>Meda, Jaghan</i>	Not consider
9	<i>Majjāvaha</i>	<i>Asthī, sandhi</i>	Not consider
10	<i>Śukravaha</i>	<i>Vṛṣaṇa, Śepha (Pudendum)</i>	<i>Vṛṣaṇa, Stana</i>
11	<i>Mūtravaha</i>	<i>Vasti, Vankshaṇ</i>	<i>Vasti, Medhra</i>
12	<i>Puriṣavaha</i>	<i>Pakvāśya, Gudā</i>	<i>Pakvāśya, Gudā</i>
13	<i>Svedavaha</i>		Not consider
14	<i>Ārtavavaha</i>		<i>Garbhāśaya, Ārtavavahadhamanī</i>
15	<i>Manovaha</i>	<i>Hṛdya (Heart and Brain)</i>	

Dhatu

According to Ayurveda, the human body is mainly composed of *Saptadatus*. "*Saptadatus*" is a Sanskrit word meaning seven components [*Sapta*= seven, *Datus*= organization]. These seven dhatu are involved in the entire structure of the body. *Dhatu* maintains the functioning of various systems, organs and vital parts of the body and plays an important role in body development and nutrition. The word "*Dhatu*" is derived from root word '*Dhru*'. This word means to hold. So, all dhatus is responsible for holding or regulating human body. As explained by *Ayurvedacharya* the function of dhatu is *Dharan* of body- '*Dharanat Dhatva*'.

Dhatu is also part of the body's protective mechanism. With the help of *Agni* (fire), they are responsible for the immune process. Each organization or dhatu is ruled primarily by one of the *Tridoshas* (*Vata*, *Pitta*, *Kapha*). If a *Dhatu* is defective, the next *Dhatu* will be affected as each *Dhatu* gets nourishment from the *Dhatu* before it. Altogether he has seven *Dhatu*, which are:

No.	<i>Dhatu</i>	Function	Get nourished from
1	<i>Rasa</i>	<i>Preenana</i> – nourishment	<i>Ahar Rasa</i>
2	<i>Rakta</i>	<i>Jeevana</i> - provides life	<i>Rasa Dhatu</i>
3	<i>Mamsa</i>	<i>Lepan</i> - support bones	<i>Rakta Dhatu</i>
4	<i>Meda</i>	<i>Snehan</i> -provides oiling and lubrication	<i>Mamsa Dhatu</i>
5	<i>Asthī</i>	<i>Dharana</i> - provide stability	<i>Meda Dhatu</i>
6	<i>Majja</i>	<i>Pooran</i> - filling the bone cavity	<i>Asthī Dhatu</i>
7	<i>Shukra</i>	<i>Garbhotpadan</i> -reproduction	<i>Majja Dhatu</i>

Dhatus have their own systems (*Srotas*). These *Srotas* are harmed by *Dosha* vitiation, resulting in diseases. Thus, *Dhatu* are the lesion site in terms of diagnosis and target receptors in terms of treatment. The increase or decrease of *Dhatu* is also evaluated for disease diagnosis. The vitiated *Doshas* reside in *Dhatu* and produce specific clinical features, as seen in *Jwara* and *Kushtha* conditions. *Dhatu* disequilibrium is disease, and *Dhatu* equilibrium is health. Disorder is defined as unhappiness, while health is defined as happiness. [Cha.Sa.SutraSthana 9/4] Diseases are prevented, tissue elements develop properly, and the ageing process is slowed in a state of *Dhatu* equilibrium [Cha.Sa. Sutra Sthana 7/49].

Role of *Srotas* in dhatu formation

According to *Acharyas*, the *Srotas* system's integrity affects a wide spectrum of life processes in both health and disease. The body's internal transportation system, or *Srotas*, serves as a platform for the actions of other significant bio-factors, such as the three *Doshas*, the seven *Dhatus*, the *Oja*, the *Agni*, the mind and emotions, etc. *Srotamsi* serve a variety of functions in addition to acting as passages or channels for the flow of different substances. Each *Srotajust* gives the necessary quantity of nourishment for its own *Dhatu*. *Srotas* is designed to transport dhatu during various metabolic stages. Each dhatu has an own metabolic pathway. Each *Dhatu's Srotas* receive *Ahararasa* and *Rasa* after being digested by the *Agni*. In

revered *Srotas* of a specific *Dhatu*, *Dhatvagni* is found. It implies that one *dhatu* is changed into another throughout the metabolic process in *Srotas*. *Poshya Dhatu* is transformed (metabolised) in *Srotas*. As a structure with pores that allow nutrients and waste products to travel into and out of the *Sthayi Dhatu*, *Srotas* acts as a conduit for the transportation of both *Mala* (waste product or product of degradation) and *Prasada* (nutrient) *Dhatu*. *Srotas* are necessary for the creation, movement, and destruction of all *Dosh*, *Dhatu* and *Mala*.

CONCLUSION

The *Srotas* restore the body to its regular state of health as well as carry out critical bodily activities. Numerous pathogenic occurrences can occur inside the body as a result of vitiation and depletion in *Srotas*. *Srotas* nourishes the body, maintains metabolic and digestive functions, and revives the cleansing process. Along with the vascular system, *Srotamsi* represent the internal transport system of the organism. All macro and micro level descriptions relating to exchange, transit, and excretion are indicated by the *Srotamsi*. The *Dhatus* serve as the body's building blocks. These are the fundamental bodily components. A healthy body and mind depend on *Dhatu*'s appropriate production because it performs a variety of functions in the human body. *Srotas* serve as a platform for the change and movement of *Dhatus*. *Poshana*, or feeding the *Sthayi Dhatu*, is one of the primary functions. In addition to carrying out crucial bodily tasks, the *Srotas* also help the body return to its pre-illness state. Numerous pathogenic processes inside the body can result from *Srotas* vitiation and depletion. *Srotas* hydrates the body, supports digestion and metabolic processes, and revives the detoxification process. In addition to representing the circulatory system, *Srotamsi* also depict the internal transport system of the organism. All descriptions at the macro and micro levels relating to exchange, transit, and excretion are indicated by the *Srotamsi*. Human bodily parts are composed of *Dhatus*. They are the body's most fundamentally useful units. The human body uses *Dhatu* for a variety of purposes, and a healthy body and mind depend on it being formed properly. *Srotas* serve as a platform for *Dhatu* transformation and transportation. One of the primary practices in *Poshana* is the feeding of *Sthayi dhatu*.

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