



Review Article

A Physio-Anatomical Study on *Anukta Srotas* with special reference of *Ashruvaha Srotas* Sourav Sharma^{1*}, Maneela Sharma²

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ABSTRACT

The number of *Srotas* are specifically compared with the number of *Bhavas* in our body. In our body, there is *Aparisankheya* (innumerable) *bhava*, so the number of *Srotas* is also *Aparisankheya*. In *Strotovimaniyaadhyaya*, where as many more *Srotas* have been mentioned in our classics such as *Ashruvaha Srotas*, *Lasikavah Srotas*, *Sandnyavaha Srotas*, etc., we get the specifics of only thirteen *Srotas* of which *Mulasthadi* have not been clarified. Awareness about these *Anukta Srotas* is needed to treat the diseases of these *Srotas*. Detailed knowledge of 13 *Srotas* is enough to believe, visualize and manage the diseases of *Laksha-Alaksha Anukta Srotas*, according to *Acharya Srotas* are the *Avakashas*, which are *Abhivahanshila* that circulate in our body and travel through their *Mulasthanas*, thus, their *Mulasthana* must be verified to learn *Anukta Srotas*. The whole body is composed of *Srotas* (micro and macro channels) according to *Ayurvedic* literature, which transports all sorts of materials throughout the body. It is important that these pathways, both micro and macro, remain intact for proper body function. We found that there is a detailed description of *Srotas* in *Samhita*. *Srotas* are connected to each-other so that other *Srotas* are also affected when one *Srotas* is vitiated. The structures that hold or circulate the *Doshas* and tissues (*Dhatu*) or their components to the different organs are the *Srotas*.

INTRODUCTION

The two Sanskrit words "Ash" and "Ruk" form this *Ashru* expression. We will obtain "Na+Shi+Dun" in *Shabda Kalpadruma* as the *Nirukti* of the word *Ashru*. There are countless *Anukta Srotas*.^[1] The *Srotas* that bear the *Ashru* are named *Srotas* like *Ashruvaha*, this *Ashruvaha Srotas* is set in eye or *Netra*, when we try to study a new *Srotas* we must first study the *Srava* or fluid element that this *Srotas* bears.^[2] We will get *AshruVyutpatty* as the "fluid fulfilling the eye which is causing the blindness or *darshana*."^[3]

Ahara Rasa has been described in *Charaka Sutrasthana* as the *Prasadansha* formed during the time of *Ahara Parinama*, and *mala* is formed as *Ahara's Kitta*. This *kitta* nourishes the *Panchendriya mala Bhaga* here, but it also shapes in the *Tridha*

Parinaman of the first *Adhyaya Rasadhatu prasadansha* and *mala Bhag*. Again, this *Mala Bhaga* offers the root of *Netrajala* besides this, when there is *Manasika Bhavas Utklesh*, then *Ashru* is also shaped and secreted, to make the word, the term *Srotas* is derived from the root 'Sru' (*Gatyarthak*) *Dhatu* and 'Asrun' suffix. According to *Charaka*, the pathways of circulation to their target are called *Srotas*, bearing the *Dhatu* (tissue components or their constituents) undergoing transformation. *Srotas* are *Rasadi Dhatus'* route. *Charaka* used the word "*Parinamamapadyamananam*" (meaning undergoing) to elaborate the definition, which implies that the channels bear tissue elements that are altered from their previous state, such as *Rasa* to its next state, *Rakta* to *Mamsa* and *Mamsa* to *Meda*, etc.^[4]

Chakrapanidatta discusses *SrawanKarma* in his commentary. It is that which takes *Poshaka Rasa* to the *Poshya Dhatu*, He found that in the body, *Srawana Karma* conveys *rasa* and *Poshya Dhatu* (nutrient tissue precursors). He notices that '*Srotas*' do not bear *Sthira Dhatus*, but rather the biochemical transformations of

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the *Dhatu*. Permanent *Dhatu*s are the *Dhatu*s that are consecutively developed from the *Poshaka Dhatu*s. Owing to the position of *Poshya Dhatu* in various parts of the body, the nutritional materials of a specific *Dhatu* do not nourish it from a *Srotas* other than its own. Therefore, for example *Asthi Dhatu* could be enabled to pass through the *Ayanamukhas* of *Medovaha Srotas* while being transported by *Rasa* through *Meda* (indirectly by *Mamsa Dhatu* as a precursor of *Meda*).

Aim & Objective

To evaluate the study on Physio- Anatomical Correlational Study on *Anukta Srotas* and *Ashruvaha Srotas*.

Methodology

Different newspapers, Ayurvedic and modern text books, authoritative pages, reputed journals, literature, manuscripts, Sanskrit *Shabdakosha*, etc. were supplied with materials pertaining to *Anukta Srotas & Ashruvaha Srotas*

Anatomical contemplation of *Srotas*^[5]

The tubes, which are common in all the spaces (Intra, Inter and Extra-cellular spaces) of the body, where the fluid circulation exists irresistibly and constantly, are known as *Srotas*, according to *Acharya Sushruta*. This are distinguished from the arteries and the veins. It is clear from this description that *Srotas* are distinct from veins and arteries and are distributed across the body extensively. The structures that hold

or circulate the *Doshas* and tissues (*Dhatu*) or their components to the different organs are the *Srotas*. The *Dhatu* is converted from the first to the last tissue layer during this circulation phase (*rasa* through *Shukra*).^[6] Each *Dhatu* has two aspects: nutrients for its own layer of tissue, and substance for the next *Dhatu* that is growing. Micro Channels *Srotas* are responsible not only for the delivery of food to the various tissues and cellular structures of the body, but also for the elimination of waste materials.

Moolasthan of *Srotas*

The *Moolasthan* or the source is known to be such that it is not possible to originate, sustain and kill the basic carrier of the body nutrient and the position that governs the whole physical relationships and processes of that particular carrier. These facts support the observation made by *Punarvasu Atreya* that no structure in the body can expand, create, waste or atrophy, independent of *Srotansi*, which later transports *Dhatu*, which is constantly subject to transformation.^[7]

Types of *Srotas*

Many types of *Srotas* are found in the body, according to *Acharya Charaka*. The definition of "*Murtimaan Bhava*" is a matter or material that resides in the body with definite form or limits. We note that the number of *Srotas* as per *Acharya Charaka* is considered to be 13, but he was very specific about the number of *Srotas* in the *Teeka*.^[8]

No.	Name of <i>Srotas</i>	(<i>Maharshi Charaka</i>) ^[16]	(<i>Maharshi Sushruta</i>)
1	<i>Pranvaha</i>	<i>Hrdya, Maha Srotas</i>	<i>Hrdya, Rasvahini Dhamani</i>
2	<i>Udakavaha</i>	<i>Talu, Klom (oropharynx)</i>	<i>Talu, Klom</i>
3	<i>Annavaha</i>	<i>Amashaya, Vamparshwa</i>	<i>Amashaya, Annava Dhamani</i>
4	<i>Rasavaha</i>	<i>Hrdya (Heart), Ten Dhamani</i>	<i>Hrdya, Rasvaha Dhamani</i>
5	<i>Raktavaha</i>	<i>Yakrt, Pliha</i>	<i>Yakrt, Pliha, Raktvaha Dhamani</i>
6	<i>Masavaha</i>	<i>Twacha (Skin), Snayu</i>	<i>Tvaca, Snayu, Raktavaha Dhamani</i>
7	<i>Medovaha</i>	<i>Vrkka, Vapavahan</i>	<i>Vrkka, Kati</i>
8	<i>Asthivaha</i>	<i>Meda, Jaghan</i>	Not consider
9	<i>Majjavaha</i>	<i>Asthi, sandhi</i>	Not consider
10	<i>Shukravaha</i>	<i>Vrshana, Shepha</i>	<i>Vrshana, Stana</i>
11	<i>Mūtravaha</i>	<i>Vasti, Vankshan</i>	<i>Vasti, Medhra</i>
12	<i>Purishavaha</i>	<i>Pakvashya, Guda</i>	<i>Pakvashya, Guda</i>
13	<i>Svedavaha</i>	<i>Meda, Lomkup</i>	Not consider
14	<i>Artavavaha</i>		<i>Garbhashaya, Artavavaha dhamani</i>
15	<i>Manovaha</i>	<i>Hrdya</i>	

Physiological function of *Srotas*

The living body has two basic components, one of which is *Chetana*. It's the one responsible for giving

life. Another component is a figure or shape, a body made up of *Panchamahabhutas*. Various structures

produced by *Panchamahabhutas* remain together and also maintain coordination with each other in order to maintain homeostasis. *Akasha* is the basic *Mahabhuta* that others have evolved from. Wherever room remains, it's because of this *Mahabhuta*. Body entities with the properties of *Akasha Mahabhuta* are-inter- and intramolecular space, various networks, terms, faces, etc. The sense of the word 'Srotas' in the dictionary is read as a current, a stream, a river. As *Srotas* are formed by *Akasha Mahabhuta*, they have characteristics such as-patency, porous, smooth, smooth, slightly unctuous, thin, colourless and translucent.

1. All systemic entities of the body derive from *Srotas*.^[9]
2. *Srotas* preserve the body's systemic entities and resist diminishing there.^[10]
3. Sensory and motor signals are carried to the body by them.
4. *Dhatu* (tissues, materials, or their constituents) are transformed to their destination by *Srotas*.
5. *Srotas* acts as the conduct units for transporting the *Prasada Dhatu* as well as *Mala Dhatu*, and *Shayi Dhatu* forming.
6. *Srotas* are not only passage or flow channels for different substances, but their functions are also unique to *Srotas*. Each *Srotas* provides a diet to their respective *Dhatu*.
7. *Srotas* are the body's inner transport system, which supplies other essential bio-factors such as three *Dosha*', the seven *Dhatu*s, the *Oja*, the *Agni*, feelings, and emotions with basic tasks.

AshruvahaSrotas^[11]

The *Srotas* (channels) that hold the *Ashru* are called the *Srotas* of the *Ashruvaha*. While explaining *Netra's Panchabhautik Utpatti*, *Acharya Sushruta* stated in *Uttar Tantra* that *Ashru Marga* is made up of *Akasha Mahabhuta*. While reflecting on the same matter, *Acharya Dalhana* said that *Ashru Marga* means *Ashruvaha Srotas*. Here it means that the *Akasha Mahabhuta* shapes all the empty spaces or *Srotas* present in the *Netra*.

AshruvahaSroto Dushti Concept^[12]

Acharya Charaka has coated a very interesting comment about *Sroto dushti lakshanas* while discussing the *Sroto Dushti* of *Srotas*, which is as described below.

1. *Ati-Pravrutti*
2. *Sanga*
3. *Granthi* of *Siranam*
4. *Gaman Vimarga*

So to understand the *Sroto Dushti-lakshanas* of *Ashruvaha Srotas*, with reference to *Ashruvaha Srotas*, we have to remember the symptoms mentioned above.

1. Atipravrutti^[13]

The greater quantity of *Ashru Srava* from *akshi* than its normal flow is known to be *Atipravrutti*. Under the *Atipravrutti Rupa Sroto Dushti of Ashruvaha Srotas*, this sort of symptom is considered.

Rodhana's

This is the primary state under which accelerated tear secretion is detected. The circumstances under which enhanced *Ashru Sravana* is found are *Shoka or Shokaja vyadhi*. We also have the *Atipravrutti of Ashruvaha Srotas* in *Shokaja Unmad, Shokaja Jwara*, etc.^[14] Also pleasure, on the other hand, contributes to the release of tears that are called tears of happiness.

Epiphora

Epiphora is an overflow of facial tears that is not caused by usual weeping. That is a pathological symptom or disorder that does not constitute adequate drainage of the tear film from the eyes, where tears flow down the face rather than into the nasolacrimal system.

2. Sanga

The *Sanga* of the *Srotas* of *Ashruvaha* is of two

Types

1. *Apravrutti / Ishad Pravrutti / Pravrutti*
2. *Sanga Doshajadi*

1. Apravrutti / Ishad Pravrutti

The *Apravrutti* of *Ashruvaha Srotas* is considered the full absence or reduced sum of *Ashru*. *Bashpa* is also called *Ashru*. There is no *Ashru* flow in such a case or the flow of *Ashru* is willingly obstructed. The *Lakshanas* generated by *Bashpavegavarodha* are to be considered as *Apravrutti* of *Ashruvaha Srotas* and *Lakshanas* according to different *Acharyas*: *Pratishyaya, Akshiroga Herudaroga Aruchi Bhrama Shirogurutvam Timiram*.

Dry eye:

Dry eye is a tear film condition that occurs due to tear loss or prolonged tear evaporation; it causes damage to the ocular interpalpebral surface and is associated with a range of ocular pain representing symptoms. Dry eye syndrome is a common disorder identified by patients receiving ophthalmologic treatment and is characterized by inflammation of the ocular surface and lacrimal glands, also known as keratoconjunctivitis sicca.

2. Sanga Doshaja

"*Doshaja Sanga* is the condition that is caused by factors that are responsible for the vitiation of

Ashru vaha Srotas, such as different diseases, *Ama*, etc. This condition is also called "*Kha-vaigunya*. In our *Samhitas*, the *Lakshanas* of this vitiation type are found scattered.

Purvarupa Netraroga's

When vitiated *dosha* are lodged at *Netra* to induce the *Dosha-Dushya Samurchhana*, the *Ashruvaha Srotas* are simultaneously vitiated and the *Ashruvaha Sroto-dushti Lakshana's* are formed.¹⁵

Siranam Granthi

The creation of *Arbuda* in the *Ashruvaha Srotas* due to *Granthi* obstruction is referred to as *Ashruvaha Srotas' Siranam Granthi Rupa vitiation*. Though discussing the *Sandhigata vyadhi Acharya* has been identified, *Granthi* as the *Vyadhi* in *Sushruta Samhita*, this is also one form of *Ashruvaha Sroto dushti*.

Acute Dacryocystitis

It is inflammation of the lacrimal sac which occurs secondarily to obstruction within the nasolacrimal duct and the resultant back up and stagnation of tears within the lacrimal sac. The tear sac is a small chamber into which tears drain. The usual cause of Dacryocystitis is blockage of the nasolacrimal duct which leads from the tear sac into nose. common implicated organisms are staphylococcus species haemophilus influenza, pneumococci. Symptoms are pus and thick discharge from the eye, redness and swelling near the lower outside eyelid fever.

Congestion- Inflammation of the conjunctiva, which is the thin and translucent membrane surrounding the white portion of the skin and the inner part of the eyelids, is a symptom of eye congestion or pink eye or conjunctivitis. This inflammation is caused by or as a response to irritants and allergens entering the eye due to some bacterial or viral infection.

4. Vimarga Gamana

The *Vimarga gamana* of *Ashruvaha Srotas* is named the shift in the usual flow path and *Gati* of *Ashru* in *Ashruvaha Srotas*.¹⁶

CONCLUSION

Anukta Srotas are the *Srotas* which are not included in the thirteen *Srotas* listed by *Acharyas* and *Srotas* that are present in the body but not formed. The numbers for *Anukta Srotas* are difficult to fix. *Pratyaksha*, *Anuman* and *Apta Pramanas* must be used as instruments for the research and knowledge of *Anukta Srotas* to be performed. Structurally, the *Srotas* are the hollow channels originating throughout the root, distributed across the whole body to serve as a distribution mechanism to satisfy the organism's nutrient needs and to get rid of the body's final metabolism performance. It can be inferred that there are reasons to recognize unique organs as the *Srotas*

Moola, such as *Utapatti Sthan Sagraha*, *Vahan Sthan*, *Naidanic Drshtikone*, *Chikitsatmak Drishtikone*.

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