



Review Article

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PATHOPHYSIOLOGICAL UNDERSTANDING OF RASAVAHA SROTO DUSHTI IN THE CURRENT SCENARIO: A REVIEW

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ABSTRACT

Srotasa are channels or pores that nourish the whole body and are responsible for some particular function with respect to specific body parts. The Ayurveda Samhitas described anatomical and physiological concepts of Srotasa broadly. Srotasa mainly regulates the process of circulation in the human body. The Srotasa not only perform various functions, but a disturbance in Srotasa may also impart some pathological manifestation. Therefore it is essential to understand the physiological concepts of Srotasa. This article presents the Ayurveda perspective of Rasa vaha Srotasa and their physiological considerations.

Keywords: Ayurveda, Srotasa, Rasa vaha Srotasa, Dhatu, Circulation.

INTRODUCTION

Since rasavaha strotas are conduits for rasa dhatu, the dushti of rasa dhatu refers to the dushti of rasavaha strotas. As the initial dhatu and the channel that conveys it, rasavaha strotas, dushti of rasa dhatu causes vitiation of the other six dhatus and their strotas. The human body is made up entirely of Srotasa. It is a system of channels in our body. Srotasa¹⁻⁵ are those from which sravana, or the flow of bodily substances, occurs or those through which the materials move throughout the body. The channels that convey the poshaka dhatus (the portion of the rasa, etc.) tissues that flow to offer sustenance to the subsequent tissues are referred to as Srotasa in Chakrapani's view. The Srotasa each have their root or moolasthanana⁶⁻⁸. The term "moolasthanana of Srotasa" is used by Chakrapani to describe the anatomical location of each srota as the primary site of pathological alterations and the treatment target. Two types of Srotasa, known as Bahirmukha and Antarmukha, are explained by Acharya Sushruta. Rasavaha Srotasa are regarded as the main Srotasa since they nourish each body area. Every cell and tissue in the body receives specialised nutrition and nourishment via the lymphatic and plasmatic channel known as Rasa Vaha Srotasa. Rasa means "movement," According to this definition, any liquid ingredient in the body that flows, including Rakta and lymph, is considered to be Rasa⁹. Since they also provide Poshana to Rasa Poshana through these Srotasa since food first travels through Yakrit before passing through Hrudaya's circulatory system and reaching all of the body's organs, Rasavaha Srotasa are regarded as the principal Srotasa. As a result, the Ayurvedic idea of Rasavaha Srotasa and contemporary heart, lung, and liver functioning may be associated¹⁰⁻¹².

One of the effective systems of complementary and alternative medicine that can offer the necessary assistance is Ayurveda. The fundamentals of Ayurveda, which include Dosha, Dhatu, Mala,

Srotasa Dusti Karana and the rising of those symptoms to lead to such diseases, apply to all ailments, including those that are just now forming. The advantage of Ayurveda, however, is that a single science cover everything. The only necessity is that we apply the Ayurvedic theories, methods of investigation, such as those outlined by Pariksha, and treatment principles to the specific basis¹³. Because we require a scientific, logical, and rational approach to our science, modern science helps us understand the concepts of Ayurveda. The concept of ahara has been characterised by acharyas as a balanced diet that aids in achieving both physical and mental welfare¹⁴. The purest and tiniest component of well-digested food is Ahara Rasa³. The Ahara Rasa's first formed Dhatu is known as Rasa⁴. Dhatvagni of Rasa Dhatu plays a crucial part in the formation of Rasa Dhatu in Rasa-vaha Srotasa⁵. Rasa Dhatu's primary function is Preenana (gratification) and Rakta Poshana (nourishment of corresponding Rakta Dhatu)¹⁵. The tissue, mainly plasma, i.e. Rasa, is circulating type nutrients, and the function is giving nutrition by the Rasavaha Srotasa. And blood, i.e. Rakta, is the haemoglobin portion of blood and provides oxygen supply by Rasavaha Srotasa and Raktavaha Srotasa. Unobstructed Srotasa es allow the manufacture of new tissues and proper flow of nutrients and waste materials. Impaired functions of Srotasa lead to Doshas, Dhatus and Malas stagnation in the Srotasa es of the respective Dhatus. Hence, improper Ahara led to the Rasa-vaha Sroto Dhusti, resulting in the formation of 'Panduroga'¹⁶⁻¹⁷.

The intricate fusion of Satva, Atma, and Sharir is life. As a result, the mind and body interact. Since ancient times, there has been evidence of a connection between the mind and the skin. Twacha is regarded as "Chetah Samvayi," meaning that the skin and Mana have an enduring bond. Combined with ojokshaya, a prakruta kapha kshaya, ati chinta, bhaya, and shoka induce vata vriddhi. Ojus and rasa vaha Srotasa are transported to the chetana sthana in Hrudaya. Ojus is the location of all dhatus' essence, which

prevents the body from being harmed by outside intrusions and maintains internal dynamic equilibrium. Ojakshaya thus causes an inadequate or malfunctioning immune system, which can result in various immune-deficient and autoimmune disorders.

Srotasa related to dhatus

1. Rasa vaha Srotasa: carrying plasma and lymph
2. Rakta vaha Srotasa: carrying blood cells and haemoglobin
3. Mamsa vaha Srotasa: carrying muscle nutrients and wastes
4. Meda vaha Srotasa: supplying to various adipose tissues of the body
5. Asthi vaha Srotasa: nutrients to the bones
6. Majja vaha Srotasa: supplying the bone marrow and nerves
7. Sukra vaha srota: carrying the sperm and ova and their nutrients

As mentioned above, it was indicated that Rasa vaha Srotasa is considered one of the important circulatory systems of the body transporting nutrients to the dhatu. Ayurveda also describes the concept of Rasadhatu as a precursor of Raktdhatu since blood circulation depends upon the total fluid level in the bloodstream. The Mulasthanas of Rasavaha Srotasa is Dhamani and Hridaya, as mentioned below.

Rasavaha Srotasa

Mula: Heart and great vessels.

Marga: Venous and lymphatic systems.

Mukha: Arteriole, venous junction in capillaries.

Rasavaha Srotasa are considered the main Srotasa since they supply nutrients to all body parts and give Poshana to Rasa Dhatu and Rakta Dhatu. Yakrit and Hridaya contribute significantly towards Ahara Rasa Poshanta through this Srotasa since food first

goes to Yakrit, through the circulatory system of Hridaya, it will circulate to all body parts. Therefore, the concept of Rasavaha Srotasa in Ayurveda may correlate with modern heart, lung and liver functions. Rasa vaha Srotasa circulates Rasa, including the lymphatic system and plasma; this process nourishes other dhatus¹⁸.

Rasavaha Srotasa perform vital functioning of the body related to the circulatory process, and physiological disturbances to their functioning may lead to some pathological manifestation, as mentioned in Figure 1. The rasa vaha Srotasa originated mainly from Hridaya and connected all over the body through Dhamanis. These dhamanis circulated rasa all over the body using the pumping of Hridaya.⁵⁻¹⁰

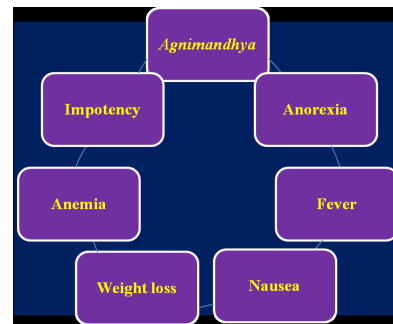


Figure 1: Symptoms associated with the disturbed physiological functioning of rasa vaha Srotasa

Classification of srotasa

Table 1: Classification of Srotasa

According to Acharya Charaka (Cha.Vi.5/7).	According to Acharya Sushruta (Su. Sha.9/11).	According to Acharya Ashtanga Hridaya (AH. Su. 3/40-41)
13 in number 1) Pranavaha 2) Udakvaha Srotasa 3) Annavaha Srotasa 4) Rasavaha Srotasa 5) Raktavaha Srotasa 6) Mansavaha Srotasa 7) Medovaha Srotasa 8) Asthivaha Srotasa 9) Majjavaha Srotasa 10) Shukravaha Srotasa 11) Mutravaha Srotasa 12) Purishvaha Srotasa 13) Swedavaha Srotasa	11 pairs of Antarmukha Srotasa 1) Two Pranavaha Srotasa, 2) Two Annavaha Srotas, 3) Two Udakvaha Srotasa, 4) Two Rasavaha Srotasa, 5) Two Raktavaha Srotasa, 6) Two Mansavaha Srotasa, 7) Two Medovaha, 8) Two Mutravaha, 9) Two Purishvaha, 10) Two Shukravaha, 11) Two Artavavaha Srotasa . 12) Bahya Srotasa (Su.Sha.5/10). Two in the nose, two in the ears, two in the eyes, one in the anuses, one of the mouths and one of the urethra. In women, there are three more Srotasa, two in the breasts and one in the blood passages.	Abhyantar Srotasa 13 1) Pranavaha Srotasa 2) Udakvaha Srotasa 3) Annavaha Srotasa 4) Rasavaha Srotasa 5) Raktavaha Srotasa 6) Mansavaha Srotasa 7) Medovaha Srotasa 8) Asthivaha Srotasa 9) Majjavaha Srotasa 10) Shukravaha Srotasa 11) Mutravaha Srotasa 12) Purishvaha Srotasa 13) Swedavaha Srotasa 14) Bahya Srotasa Two in the nose, two in the ears, two in the eyes, one in the anuses, one of the mouths and one of the urethra. In women, there are three more Srotasa, two in the breasts and one in the blood passages.

Srotasa Characteristics⁴

Table 2: Srotasa characteristics

Colour	The colour of Srotasa is similar to the dhatu they carry.
Size	Sthula (Gross or macroscopic), Anu (atomic and microscopic).
Shape	Vritta (cylindrical), Dirgha (long), and Pratana (reticulated) are the three shapes.

Mulam of Srotasa

Chakrapani has described Mulam as- "Mulamiti Prabhava Sthanam", which means the Mula of a Srotasa is the anatomical site of the respective Srotasa, the leading site of the pathology of that channel, the main site of manifestation of disease.⁵

Concept of Rasavaha srotasa⁸

Mula: Heart and blood vessels.

Marga: Venous and lymphatic systems.

Mukha: Arteriole, venous junction in capillaries.

Moola sthana of rasavaha Srotasa is hridaya and related ten dhamnis.

Rasavaha Srotasa are called primary Srotasa since they provide nutrition to all body parts and provide Poshana to Rasa and Rakta Dhatu. Through this, Srotasa, Yakrit and Hridiya contribute considerably to Ahara Rasa Poshanta since food first gets to Yakrit and then through the circulatory system of Hridiya to all body parts. As a result, Ayurvedic concepts such as Rasavaha Srotasa may be related to modern heart and liver functioning. Rasavaha Srotasa circulates Rasa, including the lymphatic system and plasma, providing food to other dhatus in the process¹⁹⁻²⁰.

Physiological Importance of Rasa Vaha Srotasa

- Paushaka Dhatu are transported to the Sthayi Dhatu through Srotasa.
- Dhatu-Vaha Srotasa is specific to Sthayi Dhatu, to which they transport nutrition.
- Srotasa carries Bhava Padarth from one place to another place.
- It transports materials and impulses also.
- It helps in the absorption of fats and minerals through the lymph and utilises the pressure of blood.
- It served as a place of transformation from Ahararasa to Rasadhatu.
- It offers pathways for transporting Rasadhatu in the body.
- This Srotasa delivers the quality of Twak that is distinguished by the appearance of Snigdha, Shlakshna, Mrudu, Prasanna, Sukshma, Alpa, Gambhira, and Sukumara
- Rasavaha Srotasa ' physiological normalcy bestows happiness, strength, fun, intelligence, and longevity.
- Rasavaha Srotasa transports nutrients and other vital components essential to the tissue's regular physiological function.
- Rasavaha Srotasa 's proper circulatory function maintains the body's thermostat.
- Rasa's biochemical processes, which Rasavaha Srotasa transports, boost the body's immune system by assisting in the assimilation and digestion of ahara.
- Rasavaha Srotasa assists the body's healing and defence mechanisms as they work at the site of harm.

CONCLUSION

The major function of Rasa is Prinana, providing nutrition to other dhatu. The function of Rasavaha Srotasa is critical to maintaining the physiology of all body tissue; if this Srotasa does not work correctly, then Dhatus nourishment does not take place, which may result in severe illness. Therefore, it may be concluded that the proper functioning of Rasavaha Srotasa is essential for nourishing and functioning vital tissues. The Rasavaha Srotasa not only transport important materials throughout the body but also helps in the defence mechanism.

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