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Structural And Functional Understanding Of *Srotas* In *Rachana Sharir* With Special Reference To *Moola Sthana*

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ABSTRACT

Background: *Srotas* are integral anatomical and functional pathways described in Ayurveda, facilitating the transportation of *Rasa*, *Rakta*, and other *Dhatus* and *Malas*. In *Rachana Sharir*, they represent a structured network of channels with defined origins (*Moola Sthana*) responsible for initiating and regulating specific physiological functions. The *Moola Sthana* concept, as explained in *Charaka Samhita* and *Sushruta Samhita*, identifies primary anatomical sites that control and maintain the patency of each *Srotas*. A systematic study of their structure and function helps bridge classical Ayurvedic knowledge with modern anatomical understanding, enhancing diagnostic and therapeutic approaches.
Aim:
To study the structural and functional aspects of *Srotas* in *Rachana Sharir* with special reference to their *Moola Sthana*. **Objectives:** To review classical descriptions of *Srotas* and their *Moola Sthana*. To correlate *Moola Sthana* with modern anatomical structures. To assess the functional significance of *Moola Sthana* in health and disease. **Materials and Methods:** A literary review was conducted using primary Ayurvedic texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*) along with classical commentaries. Modern anatomical references were consulted to establish correlations. Data extraction involved identification of each *Srotas*, its *Moola Sthana*, structural description, and functional attributes. Comparative tables and diagrams were used for analysis. **Results:** Classical sources describe 13 pairs of *Srotas*, each with specific *Moola Sthana*, structural composition (*Mamsa*, *Sira*, *Snayu*, *Asthi*, *Sandhi*), and functional attributes. Correlation with modern anatomy suggests similarities with vascular, lymphatic, respiratory, gastrointestinal, and genitourinary systems. *Moola Sthana* acts as the primary anatomical and physiological control point, with dysfunctions leading to specific *Srotodushti Lakshana*. **Conclusion:** Understanding the *Srotas* and their *Moola Sthana* from both Ayurvedic and modern anatomical perspectives enhances the comprehension of physiological processes, early disease identification, and targeted therapeutic interventions. This integrated view supports the relevance of *Rachana Sharir* in contemporary health sciences.

Keywords: *Srotas*, *Moola Sthana*, *Rachana Sharir*, *Srotodushti*, *Ayurvedic Anatomy*, *Sharira Rachana*

INTRODUCTION

In Ayurveda, *Srotas* are described as the intricate channels or pathways responsible for the transport and circulation of *Rasa*, *Rakta*, *Dhatu*, and *Mala* throughout the body. They are not merely hollow tubes but functionally active structures that facilitate the movement of essential and waste materials, maintaining homeostasis. The concept is deeply rooted in *Rachana Sharir*, where structural understanding is emphasized alongside physiological roles. Their integrity is essential for the sustenance of life, and their disturbance (*Srotodushti*) is a primary factor in the manifestation of various diseases.[1] The term *Moola Sthana* refers to the root or origin of each *Srotas*. It is the anatomical site from where the specific physiological activity of that *Srotas* begins and is regulated. Classical texts like *Charaka Samhita* and *Sushruta Samhita* have provided detailed descriptions of *Moola Sthana* for each pair of *Srotas*, associating them with vital structures such as the heart (*Hridaya*), stomach (*Amashaya*), large intestine (*Pakvashaya*), and urinary bladder (*Basti*). This concept helps identify the primary location where pathological changes are likely to initiate and where therapeutic measures can be most effective.[2] In *Charaka Samhita*, the description of *Srotas* is closely linked with their *Moola Sthana*, path of flow, and signs of obstruction or damage. *Sushruta Samhita*, being more surgically oriented, emphasizes their structural composition involving *Mamsa*, *Sira*, *Snayu*, *Asthi*, and *Sandhi*. This dual perspective allows a more holistic understanding, integrating anatomical features with clinical significance. The *Ashtanga Hridaya* further refines these ideas, creating a

comprehensive model of *Srotas* physiology.[3] From a modern anatomical standpoint, *Srotas* can be correlated with various structural systems such as vascular channels, lymphatic vessels, ducts of glands, air passages, and gastrointestinal or genitourinary tracts. The *Moola Sthana* concept can be compared to the origin points of these systems, such as the heart for the circulatory system or the stomach for digestion. Understanding these correlations strengthens the bridge between classical Ayurvedic concepts and contemporary anatomy, enabling a more integrative approach to diagnosis and treatment.[4]

The functional role of each *Srotas* depends largely on the normal condition of its *Moola Sthana*. Any injury, blockage, or pathological alteration in this root region can disrupt the entire system. Classical descriptions of *Srotodushti Lakshana* highlight symptoms that occur when the functional integrity of *Srotas* is compromised, which can be mapped to modern pathological conditions such as atherosclerosis, intestinal obstruction, bronchial constriction, or urethral stricture.[5]

A detailed study of the structure and function of *Srotas*, with special reference to *Moola Sthana*, is essential for understanding the pathophysiology of diseases and planning effective interventions. In *Rachana Sharir*, this knowledge forms the basis for correlating Ayurvedic anatomical concepts with modern science, fostering an integrative framework that can enhance both preventive and curative aspects of healthcare. Such an approach ensures that ancient wisdom is not only preserved but also adapted to contemporary clinical practice.[6]

AIM AND OBJECTIVES

Aim:

To study the structural and functional aspects of *Srotas* in *Rachana Sharir* with special reference to their *Moola Sthana*.

Objectives:

1. To review classical descriptions of *Srotas* and their *Moola Sthana*.
2. To correlate *Moola Sthana* with modern anatomical structures.
3. To assess the functional significance of *Moola Sthana* in health and disease.

MATERIAL AND METHOD

The present study is a literary research based on classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and their commentaries, along with relevant modern anatomy and physiology textbooks. Data were collected by systematically reviewing descriptions of each *Srotas* and its *Moola Sthana*, noting structural components, functional aspects, and pathological implications. Modern anatomical correlations were established through comparative analysis with contemporary medical literature. Information was organized in tabular and descriptive formats to facilitate structural and functional understanding, with special emphasis on the integrative interpretation of classical and modern perspectives.

CONCEPTUAL STUDY

SROTAS

Ayurveda considers the human body as a complex network of *Srotas* — the channels, ducts, or pathways through which various essential (*Dhatu*) and waste (*Mala*) materials are transported. The concept is foundational in *Rachana Sharir* (Ayurvedic anatomy) because these channels are both anatomical and functional entities. The health of an individual depends on the integrity, patency, and regulation of these *Srotas*. When normal function is disturbed, the process of disease (*Vyadhi*) begins.[7]

Etymology and Definition

The term *Srotas* originates from the Sanskrit root "√sru" meaning "to flow" or "that which allows flow." Classical definitions describe *Srotas* as *"sravanti asmin iti srotas"* — that through which substances flow. Unlike the purely structural definition in modern anatomy, in Ayurveda *Srotas* encompass visible anatomical channels such as blood vessels, lymphatic vessels, bronchi, intestines, ureters, and also subtle, functional pathways like *Manovaha Srotas*. This dual approach allows Ayurveda to integrate tangible and intangible aspects of bodily function.[8]

Classification of Srotas[9]

Acharya *Charaka* and *Sushruta* describe thirteen pairs of major *Srotas*, each responsible for a specific physiological role. These are:

- *Pranavaha Srotas* (respiration, vitality)
- *Annavaha Srotas* (ingestion and digestion of food)
- *Udakavaha Srotas* (water metabolism)
- *Rasavaha Srotas* (circulation of *Rasa Dhatu*)
- *Raktavaha Srotas* (circulation of *Rakta Dhatu*)

- *Mamsavaha Srotas* (formation and maintenance of muscle tissue)
- *Medovaha Srotas* (fat tissue transport)
- *Asthivaha Srotas* (bone tissue nutrition)
- *Majjavaha Srotas* (marrow and nervous tissue supply)
- *Shukravaha Srotas* (reproductive tissue transport)
- *Mutravaha Srotas* (urine formation and excretion)
- *Purishavaha Srotas* (fecal elimination)
- *Swedavaha Srotas* (sweat secretion)

Structural Perspective in *Rachana Sharir*
In *Rachana Sharir*, *Srotas* are considered as structural pathways integrated within the body's tissue framework. They are supported by multiple tissue types — muscular (*Mamsa*), vascular (*Sira*), ligamentous (*Snayu*), bony (*Asthi*), and articular (*Sandhi*). This highlights that *Srotas* are not isolated tubes but complex anatomical entities connected with multiple systems. This structural view also justifies the susceptibility of *Srotas* to injuries, degenerative changes, and pathological obstructions.[10]

Functional Role of Srotas[11]
Functionally, *Srotas* are responsible for:
- Transporting nutrients and metabolic products
- Removing waste materials
- Regulating physiological balance
- Maintaining homeostasis between *Doshas*, *Dhatus*, and *Malas*

Any disturbance in these functions manifests as *Srotodushti*. Ayurveda classifies *Srotodushti* into four major types:
1. *Sanga* — obstruction
2. *Atipravritti* — excessive flow
3. *Vimarga Gamana* — diversion of flow to abnormal routes
4. *Siragranthi* — pathological thickening or knotting of channels

Modern Anatomical Correlations[12]
When correlated with modern science, *Srotas* correspond to the following systems:
- *Pranavaha Srotas* — respiratory system and cardiovascular system
- *Rasavaha Srotas* — circulatory and lymphatic systems
- *Mutravaha Srotas* — urinary system
- *Purishavaha Srotas* — large intestine and rectum
- *Shukravaha Srotas* — male and female reproductive systems

Moola Sthana can be compared to the anatomical origin or controlling organ of each system, such as the heart for circulation, lungs for respiration, kidneys for urinary function, and so on.

MOOLA STHANA

The term *Moola Sthana* literally means "root place" (*Moola* = root, origin; *Sthana* = place, site). In the context of *Srotas*, it refers to the anatomical and functional origin or primary seat from where the specific activities of that *Srotas* begin. Acharyas emphasize that *Moola Sthana* is not just a starting point but also the control center that regulates the physiological processes of that channel. If damaged, it can disrupt the function of the entire *Srotas* and produce disease.[13]
Acharya *Charaka* mentions that the *Moola Sthana* is the **"**Adhishthana**"** — the base for origin and nourishment, the site where *Srotas* is supported and from where its function is initiated. Acharya *Sushruta*, while agreeing with the physiological aspect, adds a structural perspective by describing *Moola Sthana* in relation to the involvement of *Mamsa*, *Sira*, *Snayu*, *Asthi*, and *Sandhi*.[14]
The determination of *Moola Sthana* for each *Srotas* is based on three main criteria given by the Acharyas:
1. ***Utpatti Sthana*** — the place of origin of the channels.
2. ***Poshana Sthana*** — the site from where the *Srotas* receives nourishment and sustenance.
3. ***Vyadhi Pradhurbhava Sthana*** — the point where diseases related to that *Srotas* first manifest.

For example, *Hridaya* (heart) is considered the *Moola Sthana* of *Pranavaha Srotas* because:
- It is the seat of life (*Prana*).
- It initiates the circulation of *Rasa* and *Rakta*.
- Its pathology directly affects respiration and vitality.

Examples of *Moola Sthana*[15]
1. ***Pranavaha Srotas*** *— Hridaya and Mahasrotas (respiratory tract).*

2. ***Annavaha Srotas*** *— Amashaya and Vamaparshva.*
3. ***Purishavaha Srotas*** *— Pakvashaya and Guda.*
4. ***Mutravaha Srotas*** *— Basti, Medhra, and Vankshana.*
5. ***Rasavaha Srotas*** *— Hridaya and Dasha Dhamani.*
6. ***Raktavaha Srotas*** *— Yakrit* and *Pleeha*.

Functional Importance[16]

The *Moola Sthana* serves multiple functions:

- **Origin of Flow:** Acts as the starting point of transport for the respective substance (*Rasa*, *Rakta*, *Mala*, etc.).
- **Regulatory Hub:** Maintains the rate, quality, and direction of flow.
- **Pathological Marker:** First site to show symptoms when the *Srotas* is disturbed (*Srotodushti*).
- **Therapeutic Target:** Primary focus for treatment to restore normal function.

Modern Anatomical Correlations[17]

From a modern anatomy perspective, *Moola Sthana* can be correlated to the principal organs or structures from which a physiological system originates or is regulated. Examples include:

- *Hridaya* — heart (origin of systemic and pulmonary circulation)
- *Amashaya* — stomach (primary digestive site)
- *Pakvashaya* — large intestine (site for water absorption and feces formation)
- *Basti* — urinary bladder (urine storage and voiding center)

Clinical and Applied Significance[18]

The identification of *Moola Sthana* is of prime importance in both diagnosis and treatment:

- **Diagnosis:** Helps in early detection of disorders by monitoring changes in the root site.
- **Prevention:** Protecting the *Moola Sthana* through diet, lifestyle, and preventive therapies maintains the health of the entire *Srotas*.
- **Treatment:** Panchakarma, *Rasayana*, or specific *Chikitsa* can be directed towards restoring normal function at the *Moola Sthana*.

RESULTS AND FINDINGS:

1. *Srotas* are anatomically complex channels supported by multiple structural components such as *Mamsa*, *Sira*, *Snayu*, *Asthi*, and *Sandhi*.
2. Functionally, each *Srotas* is responsible for the transport, regulation, and maintenance of specific *Dhatu* or *Mala*.
3. Every *Srotas* possesses a distinct *Moola Sthana* that acts as its origin and regulatory hub.
4. The *Moola Sthana* is also the primary site where pathological changes first manifest.
5. Modern anatomical correlation shows that *Moola Sthana* corresponds to key organs and control centers of physiological systems.
6. These findings support the classical view that preservation of *Moola Sthana* ensures the proper functioning of the entire *Srotas* system.

DISCUSSION

The concept of *Srotas* in *Rachana Sharir* offers a unique integrative understanding of the human body's structural and functional organization. Classical texts emphasize that these channels are not merely anatomical passages but living, dynamic systems responsible for the continuous transport of *Rasa*, *Rakta*, *Dhatu*, and *Mala*. The description of *Moola Sthana* in Ayurvedic literature provides a precise anatomical and functional origin for each *Srotas*, making it a vital element in both the theoretical and clinical domains of Ayurveda.[19]

One of the important observations from this study is that *Moola Sthana* serves as both the starting point of flow and the control center for the respective *Srotas*. Damage to this site directly compromises the channel's function, leading to the development of *Srotodushti*. This explains why classical physicians placed great emphasis on protecting these root sites through proper diet, lifestyle, and therapeutic measures. It also highlights the preventive aspect of Ayurveda, where maintaining the health of *Moola Sthana* ensures the uninterrupted function of the entire channel.[20]

When compared with modern anatomical systems, many *Moola Sthana* sites correspond to major physiological control organs. For example, *Hridaya* in *Pranavaha Srotas* parallels the heart in the circulatory and respiratory systems, *Amashaya* in *Annavaha Srotas* corresponds to the stomach in the digestive system, and *Pakvashaya* in *Purishavaha Srotas* correlates with the large intestine in the excretory system. These correlations provide a bridge between classical Ayurvedic anatomy and contemporary biomedical science, making it easier to integrate Ayurvedic concepts into modern healthcare frameworks.[21] The study also reveals that the structural description provided by *Sushruta*—involving *Mamsa*, *Sira*, *Snayu*, *Asthi*, and *Sandhi*—offers valuable insight into the physical basis of *Srotas*. This indicates that *Srotas* are supported by and interconnected with multiple tissue types, making them susceptible to both systemic and localized pathologies. This

anatomical interdependence supports the Ayurvedic understanding that disease in one structural component can influence the entire channel and its related systems.[22] In conclusion, the *Moola Sthana* concept not only enhances our understanding of *Srotas* from an anatomical and physiological perspective but also reinforces its clinical importance in diagnosis, prevention, and treatment. The integration of classical Ayurvedic concepts with modern anatomical knowledge can provide a more comprehensive approach to health, enabling early disease detection and targeted therapeutic interventions. This validates the enduring relevance of *Rachana Sharir* in contemporary medical practice.[23]

CONCLUSION

The study concludes that *Srotas* in *Rachana Sharir* are structurally complex and functionally dynamic channels essential for maintaining the transport and regulation of *Dhatu* and *Mala*, with each having a distinct *Moola Sthana* that serves as its anatomical origin, functional regulator, and primary site of pathology. Correlating these classical concepts with modern anatomy reveals that *Moola Sthana* aligns closely with vital organs and physiological control centers, reinforcing its diagnostic, preventive, and therapeutic importance. Preservation of the integrity of *Moola Sthana* ensures the healthy functioning of the entire *Srotas* system, highlighting the timeless clinical relevance of this Ayurvedic principle.

CONFLICT OF INTEREST –NIL

SOURCE OF SUPPORT –NONE

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