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Scientific evaluation and comparative analysis of *Srotomula*: Insights from *Charaka* and *Sushruta*

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Abstract

The concept of *Srotomula*, the root site of *Srotas* (body channels), is pivotal in Ayurveda, encompassing its role as a developmental, generative, or regulatory site. This review examines the *Srotomula* from both anatomical and physiological perspectives as detailed by *Charaka* and *Sushruta*, aiming to provide a comprehensive analysis and comparison. According to Ayurvedic texts, S*rotomul*a is described as the foundational site of *Srotas*, serving multiple functions: *Prabhavsthan* (origin/nutrition), *Samchara Vahana* (conduction/transportation), *Niyantraka Sthana* (regulation/control), and *Samgrahasthana* (storage). *Charaka* emphasizes the physiological aspects, viewing S*rotomula* as the primary organ for the origin and regulation of *Srotas*. Su*shruta*, however, focuses on the anatomical perspective, identifying it as the hollow organ from which the *Srotas* begins. Both viewpoints highlight the importance of root organs in maintaining systemic balance. For instance, the *Yakrit* (liver) and *Pleeha* (spleen) are crucial for *Raktavaha Srotas* (blood transport), while the *Hridaya* (heart) is central to *Pranavaha* (respiratory) and *Rasavaha* (nutrient) *Srotas.* Disturbances at these sites can manifest in various health issues, such as blood disorders or respiratory problems. This study underscores that understanding *Srotomula's* multifaceted roles is essential for effective Ayurvedic practice, offering valuable insights into the regulation and function of body channels. This comprehensive analysis bridges classical Ayurvedic concepts with modern scientific perspectives, enhancing our understanding of systemic health and disease management.

Keywords: *Ayurveda; Srotas; Srotomula; Pranavaha; Rasavaha;* Body Systems

1. Introduction

Srotomula assessment in Ayurveda involves identifying foundational sites of body channels, integrating anatomical and physiological insights to understand their roles in systemic health and disease.

Srotas is primary organ within a particular system, serving as either a developmental or generative site . Pawar Pradeep Shivram concluded that determining the *Mulasthan* cannot always be achieved solely from an anatomical perspective. It is also essential to consider the controlling functions and physiological aspects in this assessment . The most comprehensive study on *Srotomula* was conducted by *Deshapande,* who categorized it into four key aspects: *Samgrahasthana* (collection site), Samcharisthana (transport site), *Abhivyaktisthana* (manifestation site), and Ni*yantraksthana* (regulatory site) . While these studies provide insights into what *Mulasthan* could be, there is lack sufficient examples and detailed exploration of the concept. Therefore, this study aims to assess and evaluate the concept of *Mulasthan* and explore its various perspectives in relation to *Srotos.*

Aim and objectives

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To investigate the anatomical and physiological concepts of *Mulasthana* of *Srotas* and their practical implications.

To explore the scientific concepts of *Mulasthana* of *Srotas* in comparison to various Acharya's.

2. Material and Method

It is a review study. The material is collected from the classical Ayurvedic texts, modern literature and various research papers etc

According to the Sanskrit lexicons the word ' *Mula*' is derived from the Sanskrit root, " *Mule Pratishyam*" which indicate about the surface or base on which the particular things are resting.

According to C*hakrapani'*s definition, *Mul*a is described as the '*Prabhavasthana*,' meaning the originating or governing site . *Sushruta,* on the other hand, considered it as the hollow organ from which the *Srotas* begins. Both *Charaka* and S*ushruta* describe two roots for each *Srotas.*

3. Discussion

After examining the literary material, it became clear that *Srotomula* performs several functions related to each specific *Srotas*. Based on this understanding, the following terms can be applied to describe *Srotomula:*

3.1. *Prabhavsthan* (Place of Origin/Nutrition)

According to the definition, S*rotomula* is considered as the *Prabhavsthan* i.e.the place of origin from where the particular commences or gets the nutrition. In case of *Raktavaha Srotas Rakt*, is mainly produced at *Yakrit* and *Pleeha;* hence these are considered as the root organs.

After the completion of digestion process, the formation of Purish takes place in *Pakwashaya* especially proximal 1/3rd part of the large intestine is mainly related with the production of fecal matter. Hence from all the above examples it can be said the root organ is the place of origin for particular *Srotas.*

3.2. *Samchara Vahana Sthana Niyantraka Sthana* / (Conduction place):

Typically, *Srotas* functions to transport body tissues involved in metabolic processes. The segment of the *Srotas* responsible for delivering nutritive materials to the respective *Dhatu* or its destination is sometimes referred to as the root organ. For example, *Rasvahi Dhamnis* are identified as the root of the *Rasavah Srotas,* which is responsible for circulating *Rasa* throughout the body. Similarly, *Rasavahi Dhamnis* and *Artavahi Dhamnis* serve to transport their respective *Dhatu.* The *Shukradhatu* (semen), produced in the *Vrishan,* is transported into the female body through the *Shepha.* All the above examples indicate that the root organ does the function of conduction and hence can be considered as the conduction place.

3.3. *Niyantraka Sthana* / (Conduction place), (Controlling point):

The concept of *Mula* in Ayurveda refers to the foundational or governing site of a particular *Srotas* (channel or system). This *Mula* plays a crucial role in regulating the physiology of its corresponding *Srotas*. When there is a disturbance or injury at this foundational site, it leads to dysfunction in the associated *Srotas.*

For example, the Hridaya (heart) is a critical *Mula* for both the P*ranavaha* (respiratory) and *Rasavaha* (nutrient) S*rotas*. Any disruption at the Hridaya can impair the function of these systems, resulting in various health issues. In cases of heart disease, symptoms such as shortness of breath (*Shwasa),* cough (*Kas*a), and hiccups (*Hikka*) often indicate a problem with the *Pranavaha Srotas* , while symptoms like loss of appetite (*Aruchi),* fever (*Jwar),* and drowsiness (Tandra) suggest disturbances in the *Rasavaha Srotas .*

These examples underscore the importance of the *Mula* as the central regulating point for its respective *Srotas.* Essentially, the specific location where a *Srotas* terminates acts as its root organ, and any dysfunction at this site can lead to a range of systemic issues.

3.4. *Samgrahasthana* (Storage place)

For the *Raktavaha Srotas*, which is responsible for the transportation and regulation of *Rakta* (blood), the key S*rotomula* or chief organ where R*akta* is stored includes the *Yakrit* (liver) and the *Pleeha* (spleen).

- *Yakrit* (Liver): The liver plays a crucial role in the formation, storage, and regulation of blood. It also detoxifies blood.
- *Pleeha* (Spleen): The spleen is involved in the storage and regulation of blood, including the removal of old or damaged red blood cells and the production of immune cells

Amashaya is the storage place of Anna(food). In case of *Medovah Srotas* if V*apavahan* is considered as then it can be said that it is the place where maximum fat accumulates.

All these examples prove that almost all S*rotomula* when gets vitiated produces the symptoms targeted to the root organs.

4. Conclusion

The concept of *Srotomula* in Ayurveda, as explored through the comparative analysis of *Charaka* and S*ushruta*, reveals its multifaceted roles in the regulation and functioning of the body's channels. This study elucidates that *Srotomula* functions as the foundational site for a specific *Srotas* and can be considered in several key aspects: as the origin or nutritive site, the conduction or transportation pathway, the controlling or regulatory center, and the storage or accumulation point.

Charaka emphasizes the physiological role of *Srotomula,* considering it as the primary organ involved in the origination and regulation of the respective *Srotas.* In contrast, *Sushrut*a focuses on the anatomical aspects, identifying the *Srotomula* as the hollow organ from which the S*rotas* begins. Both perspectives complement each other, highlighting that the health and functionality of the root organs are crucial for maintaining systemic balance. Examples such as the *Yakrit* and P*leeha* for the *Raktavaha Srotas*, and the Hridaya for the *Pranava*ha and *Rasavaha Srotas*, illustrate how disturbances at these sites can lead to various health issues. This comprehensive understanding of S*rotomula* underscores its significance as a central regulating point and provides valuable insights for clinical practice in Ayurveda.

Compliance with ethical standards

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Disclosure of conflict of interest.

I hereby declare that there are no conflicts of interest to disclose.

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