ANATOMICAL PERSPECTIVE ON VARIOUS SROTAS:

AN AYURVEDA REVIEW

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Abstract

Ayurveda described several concepts related to the physiological and anatomical perspectives of human body and concept of Srotas is one of them. The Srotas are channels of body present in large number and plays major role towards the transportation and elimination of biological materials inside the body. As per Ayurveda Acharyas innumerable Srotas make a transporting system of body which helps to maintain balances of Dosha, Dhathu and Mala. Srotas are micro channels of body, some of them are macro in structure, they possess colour of Dhathus transporting through them. Srotas mainly perform functioning of Grahana, Sravana, Vahana, Shoshana, Nissarana and Vivechana, etc. Srotas functions related with their locations and distribution inside the body, therefore anatomical aspect play important role towards the physiology of Srotas. The disturbed structural and anatomical abnormalities of Srotas can lead several health issues. The knowledge of anatomical aspect of Srotas is important to understand their physiology and involvement in disease pathogenesis, considering this present article explains anatomical perspective on various Srotas.

Keywords: Ayurveda, Srotas, Channels, Anatomy, Transportation
Introduction

Ayurveda texts described presence of innumerable Srotas (micro channels) inside the body which regulates enormous functioning of body. Srotas helps to conduct functions related to the Dosha, Dhathu and Mala. The organs of body nourishes by Srotas and these channels also facilitate elimination of waste thus detoxify body. Transportation is main function of Srotas including filtration and diffusion. Srotas helps in tissue building, metabolism, digestion, assimilation and absorptions of essential bio-materials. Srotas facilitate transportation of Prana, Anna, Vari, Dhathu and Mala, etc [1-4].

General Structure of Srota:

Structurally Srotas are gross/macroscopic (Sthula), microscopic (Anu), round (Vrutta) and elongated (Deergha), etc. in nature. They can be regarded as like lotus stalks which circulates Rasa to nourish body. The Sthula Srota is perceptible while Sukshma Srota is imperceptible. Srotas helps to maintain continuity in life cycle, the micro and macro structure of Srota support their specific functions. Srotas are tubular, large or small, straight or reticular in shape.

Number of Srota:

Charaka described 13 Srotas and Sushrutha called them Yogavahi as 11 pairs of 22 Srotas. Srotas are mainly two types; Bahya and Abhyantara Srotas, there are 9 Bahya Srotas present in male and 12 in female. Nasa Randhra, Karna Randhra, Nayana Randhra, Mehana Randhra, Guda Randhra and Vedana Randhra are types of Bahya Srotas, the Stana randhra and Rakthapatha are extra Srotas in females.

Types of Srota:

The specific Srotas meant for particular purpose i.e. Manovaha Srotas carries thoughts and emotions, Stanyavaha Srotas carry Stanya, Samjnavaha Srotas carries Buddhi while Swaravaha Srotas carry Shabda.

The other classification described three major category as Pranavaha Srotas which carries life or air, Annavaha Srotas carries food and Udakavaha Srotas carries water. The seven other types of Srota named accordingly to the materials carried by them; Rasavaha
Srota, Raktavaha Srota, Mamsavaha Srota, Meda vaha Srota, Asthivaha Srota, Majja vaha Srota and Shukra vaha Srota. The three other channels also described as Swedavaha Srota which carries sweat, Mutravaha Srota carries urine and Purishavaha Srota carries faeces [4-7].

**Srotomoola**

Srotomoola is area from which Srotas arises as like root of tree, the term Prabhavasthana described for anatomical seat of respective Srotas. The determination of Moolasthan of Srotas involves some logical points as described in Figure 1.

![Figure 1: Various aspects related to the Moolasthan of Srotas](image)

As depicted in Figure 1 Utpatti sthana, Sangraha sthana, Vahana sthana, Naidanic drishtikon and Chikitsatmak drishtikon are major view related the Moolasthan of Srotas. Utpatti sthana is Moolasthan which resembles origin point of Srotas, Sangraha sthana is Moolasthan related with storage of Srotas, Vahana sthana is Moolasthan related with conduction of Srotas, Naidanic drishtikon is Moolasthan associated with diagnostic view of Srotas and Chikitsatmak drishtikon is Moolasthan associated with clinical view of Srotas.

Mulasthan of Srotas can be divided into two categories; Sthaniya niyantrak and Pramukha niyantrak, Sthaniya niyantrak indicates Srota as local controller while Pramukha niyantrak indicates Srota as unique controller. Local controller primarily controls their corresponding Srotas i.e. Dashadhamani and Hridaya are local controller for Rasavaha srotas while unique controller can regulate Moolasthan of all Srotas. Susruta considered Dhamanis as Moolasthanas of Srotas, but he not considered Siras as Moolasthan of Srotas. However Susruta not considered Dhamanis as Moola sthanas of Medavaha, Mutravaha, Areudakavaha and Purishavaha Srotasas, etc.
The Moolasthan of some Srotas as per their origin and distribution are as follows:

- **Mula of Anna Vaha Srotas** is Amashaya and Anna vahi Dhamanies
- **Mula of Prana Vaha Srotas** is Hridaya and Rasa vahi Dhamanies
- **Mula of Rasa Vaha Srotas** is Hridaya and Rasavahi Dhamanies
- **Mula of Mamsa Vaha Srotas** is Snayu and Rakta Vahidhamaninya
- **Mula of Rakta Vaha Srotas** is Pliha, Yakrit and Rakta vahi Dhamanies
- **Mula of Artava Vaha Srotas** is Artavavahi dhamanies and Garbhashaya.

Anatomical Perspectives of Some Important Srotas:

1. **Pranavaha srotas**

   The Hridaya and Rasavahini dhamani are considered as Moola sthanas of Pranavaha srotas. Vessels which carry nutrients fluid and oxygen considered as Rasavahiniya dhamanis. This channel is responsible for respiration and circulation of Vayu throughout the system. The Prana provides energy to the living system therefore this Srotas is considered important for regulating all other physiological activities of body.

2. **Annavaha srotas**

   Sushruta considered Amashaya and Annavahini dhamani as Annavaha srotas; this system carries Ahara and essence of Ahara. This Srotas nourishes body and helps in process of digestion and metabolism. Annavaha dhamanis are blood vessels related to the stomach which involves in the nourishment of body.

3. **Rasavaha srotas**

   The Mula of Rasavaha srotas is Hridaya and related Dhamanis which are 10 in numbers. As per modern science these Dhamanis (arteries) are right coronary artery, left coronary artery, superior vena cava, inferior vena cava, pulmonary trunk and aortas. The Dhamanis which carry Rasa are called as Rasavahini dhamani which play important role for transporting essence of Dhatus that helps in body built up.

4. **Raktavaha srotas**

   The distribution of Raktadhatu is done by Raktavaha srotas, this Srota carry Raktadhatu to the pumping place from its origin sites and finally to the other parts of body.
Yakrit and Pliha are main root of Raktavaha srotas. Some texts described Yakrit, Pliha and Raktavahi dhamaniya as root of Raktavaha srotas.

5. **Mansavaha srotas**

The Snayu and Twak are Moola of Mansavaha srotas, as per Acharya Sushruta the Moola of Mansavaha srotas are Snayu, Twak and Raktavahi dhamanis.

6. **Artavavaha srotas**

Artavavaha srotas present in females, Garbhashaya and Artavavahi dhamani are root of Artavavaha srotas. This Srotas if not work properly then various pathological conditions may arises i.e. infertility, dysmenorrhea and dysperunia. This Srotas related with formation and movement of ovum and menstrual fluid. The Beejrupi artava comes from ovary and moves to the Garbhashaya. Accumulated Artava drawn towards the vagina by Vata through Dhamanis, this Dristartava bleed out every month in the form of menstrual blood [8-10].

**Conclusion**

The Dhamanis mainly act as Moola sthana of Srotas, however Dhamanis are not considered as Mula sthanas of Medavaha, Mutravaha, Udakavaha, Purishavaha and Sukravaha Srotasas. Structurally Srotas are Sthula, Anu, Vrutta and Deergha in size and shape. As per Charaka there are 13 Srotas in number while Sushrutha mentioned 22 Srotas. Stana randhra and Rakthapatha are extra Srotas present in female only. The anatomical perspective of Srotas requires consideration of some points including Utpatti sthana, Sangraha sthana, Vahana sthana, Naidanic drishtikon and Chikitsatmak drishtikon. The Moolasthana of Anna Vaha Srotas is Amashaya and Anna vahi Dhamanie, Moolasthana of Prana Vaha Srotas is Hridaya and Rasa vahi Dhamanie, Moolasthana of Rasa Vaha Srotas is Hridaya and Rasavahi Dhamanies while Moolasthana of Rakta Vaha Srotas is Pliha, Yakrit and Rakta vahi Dhamanies.

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