A THEMATIC REVIEW ON PRANAVAHASROTAS: AN AYURVED APPRAISAL

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ABSTRACT

Vata, pitta and kaphadosha move from one part of the body to another via channels called srotamsi. “Srotasus are the channels, which are widely spread all over the body, where circulation of the fluid occurs irresistibly and continuously. Most of the symptoms and signs explained in the dusthi of Pranavahasrotas are related to the respiratory system, Pranavahasrotas is one of the most significant systems in the body. Site of Pranavahasrotas is the heart and the gastrointestinal tract. They are responsible for proper circulation of oxygen to the tissues. Prana is said as pavana or anila. Life sustenance relays on Oxygen ‘Ambarapeeyusha’ and water in the body. Acharya Chakrapani has opined Pranavahasrotas are the channels through which the Pranavayu flows. Rasavahidhamani is considered as Moolasthana as mode of transportation. Therefore, it can be concluded that Mahasrotas, Hridaya, Rasavahidhamani and Moordha works together in the functioning of Pranavahasrotas.

Keywords: PranavahaSrotas, Hriday, Rasavahi Dhamani, Shwas.

INTRODUCTION

The doshas of the body, Vata, pitta and kapha move from one part of the body to another via channels called srotamsi. Srotas, in are refers to the channels of circulation existing in the human body. The acclaim of describing Srotas the first time goes to the great Indian surgeon, Acharya Sushruta. Sushruta says that the channels of circulation are present in intra-cellular, inter-cellular and extra-- cellular spaces of the human body. Though conceptually srotas are innumerable, certain number are assumed according to their specified functions so they are13 in number according to Acharya Charak1 and11 srotas according to Acharya Sushrut. 2Pranavahasrotas is one of the most important systems in the body. Prana is said as pavana or anila. Life sustenance relays on Oxygen Ambarapeeyusha and water in the body. Acharya Chakrapani has opined Pranavahasrotas are the channels through which the Pranavayu flows. The Pranavahasrotas is related with the shvasa-prasvasa kriya (respiratory function).

Respiratory tract could be considered as:

- First part (upper respiratory tract), urdhvajatrugata i.e. from nose to pharynx. Nasa, nasaputa, nasavansh, Mukhivivara, upajihvika, talu, kantha,
- Second part (lower respiratory tract) from pharynx to lungs. Klomanadi, apastambha, phupphusa
Organs-
1. Mouth cavity (mukhavivara)
2. Nose (nasika)
3. Throat (kantha)
4. Pharynx (grasanika)
5. Larynx (swaryantra)
6. Trachea (klomanadi)
7. Bronchi (apasthambh)
8. Lungs (phupphus)

Nasika (nose): Acharya Sushruta has described Nasa(Nose) under Pratyanga. Sushruta said in context of outward opening (i.e. bahirmukhasrotas) that there are 2 openings in the Nasa which could be taken as Nasachidra (nostrils). According to Charaka there are nine major orifices seven in head and two below. Here he described two orifices in Nasa which could be related to Nasachira (nostrils). The Nasaguha starts from nasaputa and related to epiglottis or upper respiratory passage.

Mukhavivara (mouth cavity): Acharya Sushruta has described it as Vaktra. Prana vayu moves in the mouth cavity.

Kantha (throat): In the process of respiration, Kantha plays an important role, which is the shvasana path (the part of the upper respiratory tract). The lower part is attached to Grasnika (epiglottis) or swaryantra (larynx). Acharya Sharangdhar, has described Kantha in the context of respiration.

Klomanadi (trachea): Klomanadi is swaspanali (trachea). Vayu enters through mukha and nasika passage through Klomanadi, Apastambha and finally in Phuphus.

Apasthambha (bronchi): On both sides of chest there are two vata carrying nadi (bronchi) known as Apasthambha, due to injury on it, causes death by filling of air in chest (pneumothorax) or cough or dyspnoea.

Phupphus (Lungs): Acharya Sushruta described Koshta (trunk consisting chest and abdomen), Phupphusas one of the eight Koshtanga. On the left and inferior aspect of heart are pliha and phupphusa, while on the right side are yakrita and kloma, while Arundutta has described the position of phupphusa, Kloma and Yakrita on right side of heart.

Anilayan: Acharya Sushruta has used term Anilayana in description of swaraghana (a type of kantagaroga). Dalhana has further explained ‘anilayana-nesuvayubhageshu’ which can be understood as svasamarga i.e. bronchial tree branching as well as alveoli.

Pranavahasrotas: Acharya Charak has described that moolastana of Pranavahasrotas are Hridaya (heart) and Mahasrotas(alimentary canal), whereas Sushruta stated Hridaya (heart) and Rasavahidhamani (blood vessels) as mool. He has considered Hridaya (heart) and Mahasrotas (alimentary canal) as mool because nutrients are obtained from anna(ahara) through alimentary canal and heart is responsible for circulation of annarasa and prana vayu (oxygen), both anna and pranavayu have been considered as prana. Pranavahasrorodusti produces various symptoms like atisrutam (increased rate of breathing), atibaddha (difficulty in breathing) kupitam, alpam or abhiksanam (breathing pattern is short with increased frequency), sasahashula (breathing associated with sound and pain) etc. which shows similarity with various respiratory diseases like as Swasa, Kasa etc. In pathogenesis of shvasa, hikkapranavahasrotas get involved. But on careful observation one can find that these symptoms are related to rate and rhythm of respiration only which in turn are controlled by Nervous system. These respiratory symptoms might be because of disturbance in respiratory system organs, cardiovascular organs or nutritional deficiency due to alimentary system organs and involvement of nervous system. This might be the reason of considering hridaya (heart, brain) and Mahasrotas (alimentary canal) as mool of Pranavahasrotas. According to Chakrapani Pranavaha Srotas stands for that Srotas which transports a specific type of vata called Pranavata.

All sensory and motor organs along with their pranavahasrotamsi are basically connected to the head (brain) in a fashion similar to connections between sunrays and the Sun. Sirasindriyaniindriyapranavahanich, srotamsisuryamivagabhastaysiahsanritani, Sarvahichestavatenasapranahpraninamsritah in this verse Acharya Charak has mentioned that all the activities either physical or mental are due to Vata and that is why it is called as Prana of all living being.
Prana vata controls and regulates the intellectual functions, mental process and activities like spitting, sneezing, belching, respiration and deglutition. All these activities are governed by Nervous system so based on above description pranavahasrotas stands for nervous system also. So pranavahasrotas should not be studied only with the correlation of respiratory system but it must be studied in context to nervous system, cardiovascular and alimentary canal (GIT).

**Symptoms of injury to Pranavaha Srotas:**
- Aakroshana – Screaming
- Vinamana – Bending of body
- Mohana – Perplexing
- Bhramana – Giddiness
- Vepana – Tremors
- Maranam – Death

All these symptoms cause due to low oxygenation or low nutrition. When there is total blockage of supply of oxygen and nutrients, it ultimately leads to death. This is also the earliest explanation available to show that the oxygen, which is the prime element representing the life and rasa or essential nutrients are transported in the same passage.

**Symptoms of vitiation of Pranavaha srotas:**
- Atisrushtashwasam – too long (prolonged) breathing
- Atibaddham – too short breathing (short of breath)
- Kupitamshwasam – difficult breathing
- Alpamalpamshwasam – frequent and interrupted / intermittent breathing
- Abheekshnamshwasam – highly disturbed breathing patterns looking scary
- Sa shabdashwasam – abnormal sounds during breathing
- Sa shulashwasam – painful breathing

**Causes of Pranava Srotas vitiation:**
- Kshaya – depletion of tissues
- Sandhaarananaat– forcibly withholding the natural body reflexes or urges Example, those of stools, urine etc
- Roukshyaat – intake of dry foods
- Vyayaamaat Kshudhitasya – excessive exercise in presence of hunger
- Anya daaranakaaraya – doing many such activities which are beyond one’s physical capacity

**Management of vitiation of Pranavaha Srotas** –
The vitiation of PranavahaSrotas should be managed on the lines of treatment of Hridroga (heart diseases), Kasa (cough) and Shwasa (breathing disorders, dyspnoea). When the symptoms of gastrointestinal tract like loss of appetite, indigestion, bloating, anorexia, regurgitation, constipation etc. are found on the backdrop of vitiation of Pranavahasrotas or if those symptoms are associated with respiratory symptoms, the alimentary tract also should be effectively treated.

**DISCUSSION**
According Acharya Charaka and Sushruta, Hridaya or heart is included as the site of Pranavahasrotas along with the lung and the whole respiratory apparatus entangled with heart. Thus, heart and lung disorders manifest with shwasa as one of the symptoms. The mention of Rasavahinidhamanis by Sushruta points towards the nutritional imbalances causing Shwasa. The mention of mahasrotas points towards the digestive imbalances and errors of metabolism causing pranavahasrotodushti, shwasa being one of its complaints. Thus treating pranavahasrotodushti combats dyspnoea caused due to lung and heart pathology, nutritional impairment and errors of metabolism.

Moola refers to the developmental or generative place. Almost all the Ancient acharyas has opines that the head or moordha being the main seat of prana, whereas there are differences of opinion regarding the roots of Pranavahasrotas. Some Acharya’s opines that Hridaya and Mahasrotas is the root of Pranavaha srotas, while some others believe Hridaya and Rasavahanidhamani to be the roots of Pranavahasrotas. In a human body, nose is said to be the gateway of head, it can be assumed that Pranavahasrotas is a structure made up by various organs right from the tip of nasa up to the mahasrotas.

**CONCLUSION**
Pranavahasrotas is one of the most significant systems in the human body. The site for Pranavahasrotas is the heart and the gastrointestinal tract which are responsible for proper circulation of oxygen to the tissues. Pranavahasrotas should not be studied only with the correlation of respiratory system but it must
be studied in context to other major systems (*srotas*) like nervous system, cardiovascular system and alimentary canal. For basic life support for survival of human being the expert management of *Pranavahasrotas* very critical in clinical scenario.

**REFERENCES**


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