

## CRITICAL STUDY OF ANNAVAHA SROTAS MOOLSTHANA W.S.R. TO ANNAVAHINI DHAMANEE

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### ABSTRACT

In *Ayurvedic* classics the term *Srotas* is used as dynamic inner transport system of body-mind-spirit organization system. Each *Srotas* is attached to a specific anatomical structure called *Moola* which influences the normal functioning of *Srotas*. *Annavaha Srotas* is the channel for transportation, digestion and absorption of food. Its *Mool* are *Amashaya*, *Vamparshwa* as per Charak and *Annavahini Dhamanee* as per Sushruta. *Dhamanee* is a comprehensive term used in *Ayurveda* compendia at various places in different context like Artery, Nerve, tubular structure etc. Thorough review of literature from *Ayurved* compendia, modern texts and journals was done to clarify the term *Annavahini Dhamanee*. In previous studies some researcher quoted *Annavahini Dhamani* as Artery or Blood vessels related to stomach. Every *Srotas* has two components one is act as source or reservoir and other work as disposing organ. As *Annavaha Srotas* and its components deals with transportation of food material, the *Annavahini Dhamanee* stated is a tubular structure other than artery. *Annavahini Dhamanee* delineated in context of *Annavaha Srotas* can be considered as esophagus and small intestines.

**Keywords:** *Annavaha Srotas, Annvahini Dhamanee, Aamashaya, Moolsthan, Vamaparshwa*

### INTRODUCTION

*Ayurvedic* classics proclaim “*Srotomayam hi Shariram*” means living body is a channel system comprised of innumerable channels which are designed as inner transport

system for divergent functions gross and subtle, tangible and intangible, biological and energetic.<sup>1, 2</sup> *Srotas* is used as a generic term indicating all the macro and micro channels

and pathway operating in a living organism. *Sushrutacharya* described *Srotas* structures within the body in the form of channels performing *Vahankarma* (transport) of *Dhatu* and it is different from *Sira* (vein) and *Dhamani* (artery). Each *Srotas* is attached to a specific anatomical structure called *Moola*. "*Mulamiti Prabhav Sthanam*" *Moola* means root or base. The base is known as "*Prabhav Sthanam*" or area of influence.<sup>3</sup> But in reference to *Srotas*, they are the two cardinal organs, directly or indirectly related through the scattered *Srotas* of body. The normal functioning of the particular group of channels is depending upon its *Moola Sthana*. According to *Ayurveda*, *Acharyas* has given different estimation concerning *Moolsthana* of *Annavaaha Srotas*. *Acharya Sushruta* has reveals *Aamashaya* and *Annavaahini Dhamanee* as a *Moolasthan* of *Annavaaha Srotas*<sup>4</sup> whereas *Acharya Charak* and *Vagbhata* enlightened *Aamashaya* and *Vama Parshva* as a *Moolasthan* of *Annavaaha Srotas*.<sup>5</sup> so there is ambiguity concerning *Moolasthan* of *Annavaaha Srotas* in *Ayurvedic* compendia.

### Materials and Methods:

Thorough review of literature related to *Srotas* and relevant topics was done through the *Ayurved Compendia*, various other *Ayurved* texts and textbooks of contemporary science. The references from internet and journals were also critically reviewed. The study was initiated for Affirmation of *Moolsthana* of *Annavaaha Srotas* as per *Sushruta*.

### Review of Literature:

*Srotas* is derived from 'Sru Gatou' root which means mooring, filtering, flowing, leaking, secreting etc.<sup>6</sup> *Srotas* is internal transport sys-

tem of the body. Total 13 *Srotas* are described by *Charak* while *Sushruta* has described 11 *Srotas*.<sup>7</sup> *Annavaaha Srotas* is commonly described by both the *Acharya*. *Annavaaha Srotas* have their origin in *Aamashaya* and the left lateral side. The symptoms such as loss of desire for food, anorexia, indigestion and vomiting indicate the affection of *Annavaaha Srotas*.<sup>8</sup> Food carrying channels are two with their roots being *Aamashaya* and food carrying *Dhamanis*; if injured, it causes flatulence, colic, aversion to food, vomiting, thirst, blindness and death.<sup>9</sup>

The literature review from *Bruhatrayee* related to *Annavaaha Srotas* denotes following three root sources.

1. *Aamashaya*
2. *Annavaahi Dhamanya*
3. *Vama-parshwa*

### *Aamashaya*:

It is chief organ of *Annavaaha Srotas* and situated in *Vamaparshwa* (Lt. hypochondriac region).<sup>10</sup> The organ situated between *Sthananantara* (breasts) and *Nabhi* (umbilicus) is known as *Aamashaya*.<sup>11</sup> *Sweda*, *Rasa*, *Lasika*, *Rudhira* and *Aamashaya* are sites of *Pitta*. *Aamashaya* is principal location of *Pitta*.<sup>12</sup> *Sushruta* told that *Aamashaya* is a *Kaphasthana* and is situated on superior plane of *Pittashaya* as its direction of action is opposite to that of *Pitta* which is *Urdhwa Gati*.<sup>13</sup> *Prana* conveys the food to *Aamashaya* which acquires sweetness and foaminess in ingested food.<sup>14</sup> The sweet and cool *Kapha* keeps the food non irritant, in fluidly status and in viscous condition hence it is derived that first stage is *Madhura* stage, generating *Kapha*.<sup>15</sup> *Aamashaya* is considered as *Matrujavayav* as it is soft in nature

while in Ashtanga Sangraha, 1 *Peshi* is present in *Aamashaya*. It is one among *Saptashaya*.

### **Dhamani:**

While differentiating between *Sira*, *Dhamanee* and *Srotas* Acharya Charak quotes that '*Dhmanat Dhamanya*'. *Dhamani* is a structure through which transportation takes place like *Sira* and *Srotas* but the difference is of presence of pulsations in it.<sup>16</sup> *Srotas*, *Sira*, *Dhamanee* etc. are the names of visible and invisible spaces within the *Sharirdhatu*.<sup>17</sup> Vessels which carry *Ras* and *Rakta* towards the body and has property of pulsation are known as *Dhamanee*.<sup>18</sup>

### **Annavaahini Dhamanee:**

A tubular structure extending from mouth to stomach is called *Anna Nadi* or *Anna Vahinee*. This *Annanadi* (esophagus) is situated behind the *Swasa Nadi* (trachea), expands below like a funnel, passes through diaphragm and enters the abdominal cavity to continue itself as '*Aamashaya*' the stomach. Acharya Sushruta has included this as root source of *Annavaaha Srotas*.<sup>19</sup>

### **Kshudrantra (Grahanee):**

*Kshudrantra* lies in between *Aamashaya* and *Pakwashaya* (the large intestine). Since it retains the food, allows the digested food to pass on to the next stage of digestion, it is known as "*Grahanee*". It is supported by the *Jatharagni* and the *Jatharagni* is supported by the *Grahani*. In case it becomes deranged by *Agnimandya* or *Agnidushti* it allows the undigested food only for excretion. Even if the food is digested, an injured *Grahanee* gives rise to pain, tenesmus offensive stools and constipa-

tion or diarrhea. Such a condition is called '*Grahanee Roga*'. This organ acts as a valve or door to the alimentary canal.<sup>20, 21</sup>

## **DISCUSSION**

*Srotas* is a comprehensive term used in Ayurved compendia. The body consists of various components like *Dosha*, *Dhatu* and *Mala*. Since *Dosha* are biological forces they are situated in every part of body. The other body components (*Bhavpadartha*) need to be transported from one place to another. *Srotas* are the channels present in the body for the transportation of these materials. Each *Srotas* consist of root sources and transport system. Usually *Moolsthana* are the two cardinal organs, directly or indirectly related through the scattered *Srotas* of body. The normal functioning of the particular group of channels is depending upon its *MoolaSthana*. Between two root sources one is collecting or generating organ while other is disposing organ.

*Annavaaha Srotas* is one of prime *Srotas* present in our body providing nutrition to each cell of body. The *Moolsthana* stated in *Bruhatrayee* are *Aamashaya*, *Vamaparshwa* and *Annavaahi Dhamanee*. The *Annavaahi Dhamanee* stated by Sushruta in context of *Annavaaha Srotas* is not clarified well in Ayurved literature. The *Aamshaya* stated in Ayurved has great similarities with Stomach in contemporary science. The stomach is a sac-like organ with strong muscular walls. In addition to holding food, it serves as the mixer and grinder of food. The stomach secretes acid and powerful enzymes that continue the process of breaking the food down and changing it to a consistency of liquid or paste. From there, food moves to the small intestine. Be-

tween meals, the non-liquefiable remnants are released from the stomach and ushered through the rest of the intestines to be eliminated.<sup>22</sup>

The *Vamaparshwa* stated by Charaka can be considered as left lateral aspect of abdominal cavity which can be correlated with left hypochondriac region. The greater part of stomach resides in this area. Any pathology or vitiation in *Annavaaha Srotas* produces symptoms in this region. It is a probable cause that Charakacharya included *Vamaparshwa* as one of root source of *Annavaaha Srotas*.

According to Sushruta, one of *Moolasthan* of *Annavaaha Srotas* is *Annavaahini Dhamanee*. *Dhamanee* is a broad term used in *Ayurveda* compendia at various places and is related to transportation of materials. In general the word *Dhamanee* is taken as artery as per *Ayurved* literature is concern. But many times such terms are used in many contexts e.g. *Dhamanee* is used as a synonym of *Srotas* by Charak; Whereas Sushruta has excluded *Sira* and *Dhamanee* from definition of *Srotas*. It seems that a term like *Dhamanee* has meaning depending upon the place or context where it is used.

In previous works *Annavaahini Dhamanee* is taken as Artery or Blood vessels related to stomach. But the transportations of food through blood vessels is mere impossible. The ingested food passes through mouth to esophagus and received by stomach for storage. The matter is then released from stomach to small intestine through pyloric sphincter. In small intestine essential nutrients are absorbed through wall and picked up by red blood cells which are rich in oxygen and move throughout the body.

The stomach acts as a reservoir of food but its transportation is facilitated by esophagus and small intestine. The esophagus consists of a muscular tube through which food passes from the pharynx to the stomach. At rest the esophagus is closed at both ends, by the upper and lower esophageal sphincters. The opening of the upper sphincter is triggered by the swallowing reflex so that food is allowed through. The sphincter also serves to prevent back flow from the esophagus into the pharynx. The junction between the esophagus and the stomach (the gastroesophageal junction) is controlled by the lower esophageal sphincter (LES) which remains constricted at all times other than during swallowing and vomiting to prevent the contents of the stomach from entering the esophagus.

Small intestine made up of three segments viz. the duodenum, jejunum and ileum. Ingested food starts to arrive in the small intestine after one hour and after two hours the stomach has emptied. The bolus is received in the duodenum is processed by the addition of bile along with the secretions from the pancreatic duct. It then becomes the partially digested semi-liquid food termed as chyme. The duodenum is first section of the small intestine which is a hollow, jointed C-shaped tube connecting the stomach to the jejunum which continues as the ileum. The duodenum is largely responsible for the continuing breakdown process, with the jejunum and ileum being mainly responsible for absorption of nutrients into the bloodstream. Most food digestion takes place in the small intestine. What's leftover (the waste) moves into the large intestine.

In above discussion, it is clear that the esophagus and small intestine are two tubular structures connected stomach helping for transportation of ingested food as well as its digestion. The *Dhamanee* is also a tube like structure which performs the function of transportation. *Annavaahi Dhamanee* is stated by Sushruta as a *Moolsthana* of *Annavaaha Srotas* while in definition of *Srotas* he has excluded *Sira* and *Dhamanee*. It means that the *Dhamanee* expected here is the tubular structure for transportation of concerned material and not the artery. The detailed study of digestive system as per contemporary science clears that esophagus and small intestine helps for transportation of food in relation to stomach. So esophagus and small intestine can be considered as *Annavaahi Dhamanee* stated by Sushruta.

## CONCLUSION

*Srotas* is the macro, micro channels and pathways operating in a living organism for transportation of body tissues. *Annavaaha Srotas* describe in *Ayurvedic* epics is related to structural and functional units associated with mechanical and chemical digestion in esophagus, stomach and small intestine. The esophagus and small intestines can be correlated with *Annavaahini Dhamanya* described by Sushruta as *Moolasthana* of *Annavaaha Srotas*.

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