

**REVIEW OF AAMASHAYA AS PER CLASSICS AND ITS
CORRELATION WITH MODERN SCIENCE**

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Article Received on
09 Oct. 2016,

Revised on 29 Oct. 2016,
Accepted on 19 Nov. 2016

DOI: 10.20959/wjpr201612-7474

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ABSTRACT

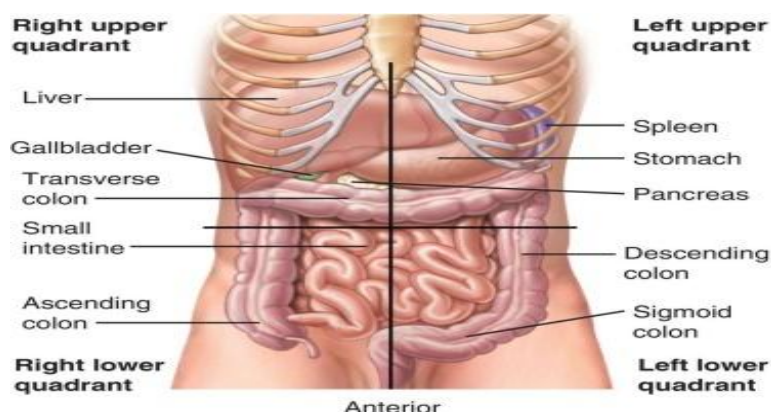
In *Ayurveda* the knowledge of *Sharir* has been explained under the heading of *Sharir sthana*. *Acharya* have been very well known about structure of the various parts of the body. They explained term “*Ashaya*” for the hollow structure of the body having the capacity to store something in it. The term *Ashaya* can be compared to hollow viscera in the body which has lumen to provide accommodation to one or other essential substances, so *Ashaya* can be defined as space meant for occupancy of essential substances needed for body functioning (*Aamashaya*, *Raktashaya*) and also for the waste materials which are to

be eliminated (e.g- *Mutrashaya*). While being specific to the location of *Aamashaya* our *Acharyas* have different opinions regarding this, among all variants we can consider it is a structure situated beneath lungs being separated by the diaphragm apart from this. *Aamashaya* has typical shape, size, muscles and location which help it to perform its proper function. In review of histology of stomach it has 2 muscular layers 1) Muscularis mucosa 2) Muscularis externa. This physio-anatomical knowledge of *Aamashaya* is very useful while diagnosing the disease, treating the disease and operating surgical procedures of it. Thus in this article an attempt is made to explore the structure basis of *Aamashaya* explain by our *Acharya* in classics with modern review.

KEYWORDS: *Aamashaya, Peshi, Snayu.*

INTRODUCTION

The knowledge of *Sharir* is not confined only to *Sharir Sthana*, it is seen in various *Sthanas* of our classical treatise. The basics of *Sharir* (Macroscopic and Microscopic) must be known to every physician for treating the diseases; it is composed of various cells which forms tissues further these leads to development of organs. Thus *Aamashaya* is an organ can be compared to stomach as per modern science while in *Ayurveda* it is considered as *Ashaya* the word meaning of which denotes space meant for occupancy of essential substances needed for body functioning (*Aamashaya, Raktashaya*) and also for the waste materials which are to be eliminated (e.g- *Mutrashaya*).^[1] The physio-anatomical knowledge of *Aamashaya* is very useful while diagnosing the disease, treating the disease and operating surgical procedures of it. So an attempt is made to explore the structural basis of *Aamashaya* explained by our *Aacharyas* in classics with its apparent modern review.



“Fig. 1” Position of *Aamashaya* (Stomach) in our body

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It is called so because the *Anna* (food) found in this will be in *Apakwa* form i.e, *Ama*. *Aamashaya* is also included under *Koshtanga* by our *Acharyas*. *Kostha* is the *Antarmarga* and this *Antarmarga* is also called as *Mahasrotas* which includes *Aamashaya* and *Pakwashaya*.^[2] *Chakrapanidatta* has divided it into two parts; *Urdhwa Aamashaya* and *Adho Aamashaya*.

Further while describing its relations the superior part is related to *Annalika* while its inferior part is related to *Grahani*. While explaining the concept of *Trayorogamarga* in *Sutra*

Sthana Acharya Charaka mentioned various synonyms of *Kostha* i.e, *Ama-Pakwashaya*, *Mahasrotas*, *Sharirmadhya*, *Mahanimna* etc.^[3]

Mahasrotas

The term *Mahasrotas* represents a tubular tract extending from cavity of mouth to the terminal part of anal opening. This *Srotas* is divided into three parts-

1. from mouth to *Aamashaya*---*Annalika*
2. from *Aamashaya* to *Unduka*---*Kshudrantra*
3. from *Unduka* to *Guda*---*Pakwashaya*

By this we can conclude that the *Mahasrotas* and *Aamashaya* are different entities which are dependent.

Aamashaya is considered as *Moola Sthana* of *Annavaha Srotas* Symptoms produced by *Annavaha Srotoviddha* are *Adhman*, *Shoola*, *Annadvesha*, *Chhardi*, *Pipasa*, *Andhyam* and *Maranam*.^[4]

In *Astanga Sangraha* described 13 *Srotas* only by name *Prana*, *Udaka*, *Anna* is one-one, *Dhatus Vaha* are seven and *Malas* are three, all are known as *Ayatana*. *Moola Sthana* of *Annavaha Srotas* is *Aamashaya* and *Vama Parshva*.^[5] In *Astanga Hridaya* same approach as *Astanga Sangraha* but *Moola Sthan* is not mentioned. *Srotas* are known as *Jeevitayatan* (base of life).^[6]

According to charak samhita

Detailed description of *Annavaha Srotas* is available in *Charak Samhita*. *Charak* has explained 13 *Srotas* in *Srotoviman* chapter 5 of *Viman Sthana* and *Annavaha Srotas* is one of them.

Moola Sthana of the *Annavaha Srotas* is *Aamashaya* and *Vama Parshva*.^[7] *Annavaha Srotamsi* gets vitiated due to untimely intake of excessive quantity of *Apathya* food and impairment of *Jatharagni*. Symptom of *Annavaha Srotomoola Dusti* is *Annanabhilasha* (loss of desire for food), *Aruchi*, *Avipaka* and *Chhardi*.

The opinion of *Acharyas* differs in its location is as follows:

| | Charak | Sushrut | Vagbhata |
|----------------------------|--|--|---|
| <i>Sthana of Aamashaya</i> | between <i>Nabhi</i> and <i>Stana</i> . ^[8] | above <i>Pittashaya</i> . ^[9] | between <i>Kaphashaya</i> and <i>Pittashaya</i> . ^[10] |

Modern Review

Histology^[11]

The gastrointestinal tract has a form of general histology with some differences that reflect the specialization in functional anatomy. The GI tract can be divided into four concentric layers:

- ◇ Mucosa
- ◇ Sub mucosa
- ◇ *Muscularis externa* (the external muscular layer)
- ◇ Adventitia or serosa

Mucosa

The mucosa is the innermost layer of the gastrointestinal wall that is surrounding the lumen, or open space within the tube. This layer comes in direct contact with food called bolus and is responsible for absorption, digestion and secretion which are the important processes indigestion. The mucosa is made up of three layers:

- ◇ Mucous epithelium - an inner layer.
- ◇ Lamina propria - a layer of connective tissue.
- ◇ *Muscularis mucosae* - a thin layer of smooth muscle.

The mucosae are highly specialized in each organ of the gastrointestinal tract, facing a low pH in the stomach, absorbing a multitude of different substances in the small intestine and also absorbing specific quantities of water in the large intestine. Reflecting the varying needs of these organs, the structure of the mucosa can consist of invaginations of secretory glands (e.g. gastric pits), or it can be folded in order to increase surface area (in the small intestine, particularly the ileum).

Submucosa

The submucosa consists of a dense irregular layer of connective tissue with large blood vessels, lymphatics and nerves branching into the mucosa and *muscularis externa*. It contains Meissner's plexus, an enteric nervous plexus, situated on the inner surface of the *muscularis externa*.

Muscularis externa

The *muscularis externa* consists of an inner circular layer and a longitudinal outer muscular layer. The circular muscle layer prevents food from traveling backward and the longitudinal layer shortens the tract. The coordinated contraction of this layer is peristalsis and propels the bolus, or balled-up food, through the GI tract.

Adventitia

The adventitia consists of several layers of connective tissue.

- ◇ When the adventitia is facing the mesentery or peritoneal fold, the adventitia is covered by a mesothelium supported by a thin connective tissue layer, together forming a serosa, or serous membrane.
- ◇ The parts of alimentary canal that are lined by adventitia are oral cavity, esophagus and anal canal.

◇ Germ layers

- ◇ Endoderm - epithelium and associated glands.
- ◇ Mesoderm (splanchnic) - mesentery, connective tissues, smooth muscle, blood vessels.
- ◇ Ectoderm (neural crest) - enteric nervous system (neural tube) - extrinsic innervations.
- ◇ Both endoderm and mesoderm will contribute to associated organs.

Blood supply of stomach^[12]

- (1) The left gastric artery - a branch of the coeliac trunk.
- (2) The right gastric artery - a branch of the common hepatic artery.
- (3) The right gastroepiploic artery - a branch of gastroduodenal artery.
- (4) The left gastroepiploic artery - a branch of the splenic artery.
- (5) The 5 to 7 short gastric arteries - branches of splenic artery.
- (6) Veins of stomach drain into the portal vein, superior mesenteric vein and splenic vein.

DISCUSSION

Mahasrotas is a long tubular structure which extended from mouth to anus includes *Aamashaya* and *Pakwashaya* while Gastro-intestinal tract is the same structure which included oesophagus, stomach, small intestine and large intestine.

Ayurveda mentioned the term *Kostha* for abdominal cavity where in *kosthanga as* are situated while modern medical science has termed it as thoraco-abdominal cavity everywhere visceral organs are presents.

The term *Ashaya* means *Adhistan* (place where can stay for some time) e.g. *Aamashaya* is the *Ashaya* where *Ama- Anna* stay for some time. Same as the stomach where the meal stays for a while to facilitate the proper mixing and digestion by mixed gastric juices.

According to *Ayurveda Aamashaya* is situated between *Nabhi* and *Stana* whereas according to modern medical science stomach is situated mainly in left hypochondrium which similar as mention in *Ayurveda*.

As per *Ayurveda Aamashaya Anta* is the place of *Sushir Snayu* and function of *Snayu* is to bind and thereby help in weight bearing whereas medical science has described that pyloric sphincter is the last part of the stomach and similar in function, structural hardness and strength. The binding nature here is clear in the fact that the sphincter is always in a constricted state thereby bearing the weight of the contents present above it.

Aamashaya is the considered as the seat of *Pitta* and *Kapha* specially *Pachaka Pitta* and *Kledaka Kapha*. The different gastric juices and hydrochloric acid secreted by stomach cells can be attributed the same properties of *Pitta* as liquefaction and breakdown of the *Anna*. While hydrochloric acid helps in the transformation of pepsinogen into pepsin and combination of B12 with intrinsic factor. Likewise mucus is secreted by glands of stomach have the properties of *Kledaka Kapha* as lubrication of *Anna* and protect the stomach wall.

According to *Ayurveda, Aamashaya* is the base of *Ranjaka Pitta* which converts *Rasa* into *Rakta* through *Ranjana Karma* whereas according to medical science this is similar to the function of vitamin B12 because of the B12 Transcobalamin-II complex which is finally secreted into the portal circulation from where it is taken by the liver, bone marrow and other cells for the formation of blood.

Moola sthana of *Annavaha Srotas* is *Aamashaya* and *Vama Parshwa*. In *Vama Parshwa-Aamashaya, pleeha* and desending part of *vrahad Antra* are present. According to medical science stomach is the part of digestive system. It is situated mainly in left hypochondriac region.

CONCLUSION

With the knowledge of anatomy, understanding the body in as many ways as possible ends up in treating the underlying pathologies. If we do not know the organisation of every structure, but when we understand some of the intricacies about how we have been put together and how structure serves function we can extend this into our treatments when appropriate.

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