AN ANATOMICO-PHYSIOLOGICAL CONSIDERATION OF PITTAshAYA WITH ITS APPLIED ASPECT

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ABSTRACT

In India traditional Ayurveda carries its own concepts of anatomy called Sharir Rachana. Sushurta Samhita is best in Sharir Sthan. In Sharir sthana of Sushrut Samhita, seven Ashayas are described in the body.[1] It is need to explore the concept of Ashaya for better understanding. Tridoshas are very much important entities for the normal functioning of the body. They are considered as primary and most essential factors in situation of human organism. A deranged condition of these three fundamental humors may bring about its dissolution or death[2], while on their continuance in a normal state depends the vitality of organism. One of these is the concept of ASHAYA described in Sushrut Samhita. In this study, attempt is made to explore the concept of Pittashaya in Sushrut Samhita and interpret it anatomically. This will help to explain the exact meaning of Pittashaya.

KEYWORDS: Ashaya; Dhatus; Pittashaya; Tridosha.

INTRODUCTION

Our Great Acharya Sushrut crowns the glory of a great surgeon whence examined the human complex structures and organs through the dissection and states the fact that for being a surgeon it is required to ascertain the anatomy of different organs through dissection. Organ System forms the basis of anatomy which is laid down by Acharya Sushrutas Koshtha, Koshthang and Ashaya in Ayurveda. Koshthang situated in the Koshtha(cavity) are the organs that work together as a “Biological system” to perform one or more functions in the body. Ashaya is related to Tridosha is mentioned in Sushrut Samhita. Even though tridoshas are important; they are unable to work separately.[3] They circulate along with blood in the
body. Sushrut Samhita has given equal importance to Blood. Three humors in combination with a fourth (Blood), determine the origin, preservation and dissolution of organism and permeate it with their respective properties till the moment of death. So after the Tridosha, Ashaya for Blood is mentioned. Anna rasa nourishes Dhatu. During process of digestion, Ahara undergoes two stages, Amavastha i.e. partially digested food, and Pakwa Awastha i.e. Digested food. So, next Ashaya given for Ama Anna (Amashya) and Pakwa Anna (Pakwashaya). After Pachana, Sara and Kitta Vibhajan takes place. Sara is absorbed for nourishment while Kitta again differentiate into Purish and Mutra. Purisha remains in Pakwashaya i.e. Large intestine. It is the remains of pakwa anna. So Ashaya for purisha is not mentioned separately, but Mutra is stored in different site, so next Ashaya is mentioned for Mutra. According to different Acharyas of Ayurveda one extra Aashaya is considered in women body that is Gharbhaashaya. As every organ is designed for a particular and appropriate function. ‘Pittashaya’ is also one of them where Pitta resides for appropriate function. According to Acharyas, Pitta secreted in an area between Ama-Pakwasahya Madhya is known as Pachak Pitta. It is Panchbhauti in its composition and Drava or liquid in consistency, inspite of which it performs actions similar to ‘Anal’ (fire), largely due to the ascension of its Tejas component over the rest. It digests the food and separates the Sara from Kitta.

AIMS AND OBJECTIVE

1. To find out any correlation between the concepts mentioned with modern medical literature and Ayurvedic Samhita and Granthas.

2. To find out any Anatomico-Physiological correlation of Pittashaya in work entitled “An Anatomico-Physiological Consideration of Pittashaya with its Applied Aspect”.

MATERIAL AND METHODS: SOURCE OF DATA
To conduct the present study entitled “An Anatomico-Physiological Consideration of Pittashaya with its Applied Aspect” the whole study taken up as follows

1. LITERARY STUDY
In Sharir sthana of Sushrut Samhita, seven Ashayas are described in the body; they are Vaataashaya, Pittaashaya, Shleshmaashaya, Raktaashaya, Aamaashaya, 5P akwaashaya, Mootraashaya and Gharbhaashaya. It is need to explore the concept of Ashaya for better understanding. Tridoshas are very much important entities for the normal functioning of the body. They are considered as primary and most essential factors in situation of human
organism. Ashayas are defined as space or place meant for occupancy. They are occupied by the essential ingredients needed for body functioning (Example, Rakta or blood in Raktashaya or Liver and spleen) and also by waste materials which needed to be avoided(Example, Mutra or urine in Mutrashaya i.e.urinary bladder). Acharya Sushruta define Aashaya -Aashaya abhyayaasa yogena karoti aashaya sambhavam, by the virtue of repeatedly staying at a place, the Vayu creates Ashayas.

Ashaya means not a single organ but it the site in the body where seven entities, Vata, Pitta, Kapha, Blood, Partially digested food, fully digested food and Store of Urine are predominantly present, so as to maintain normal functioning in the body. Tridoshas are functional entities which are carried with Blood all over the body. Their presence in the Ashaya is very important; Without their contribution, not a single process can start. These sites can be considered as the prime functional areas in the body.

2. CADVERIC STUDY
The seat of Pitta or organs of gastrointestinal tract where Pitta resides for appropriate functions explored through the human dissection in the dissection hall of the State Ayurvedic College and Hospital, Lucknow in PG Department of Rachana Sharir.

According to Dalhana, commentator of Sushrut Samhita, the meaning of Ashaya is the site or place in body. Accordingly, sutra can be studied as follows:

**Vatashaya:** Means the site of Vata in the body. Vata is described as energy. Its existence can be judged by its normal functions. Vata is superior to all doshas. It controls all other entities in the body; also it helps in perception of knowledge by Indriyas. If we observed the functions of Vata, it is as similar as nervous system in modern science. Our nervous system, coordinates and controls every function in the body through vital nerve messages and is responsible for all healing, repair and regeneration in your body; and according to Ayurveda Vaat is the one of the main Dosha of basic three Doshas which regulates and controls the other two Doshas and as well as our body's nervous system which is the basic and most important system which regulates the other systems of body same as Vaat; So we can consider nervous system as Vatashaya.[6]

**Pittashaya:** Means site of pitta in the body. Main function of Pitta is related to Pachana (sthula and sukshma) including digestion and cellular metabolism. If we observed the function of Pitta, it is mainly related to pachana which includes the digestion, transformation.
Pitta prepares material to be absorbed or metabolized at macro or micro levels. This function is seen in chemical activities like digestion and assimilation. So, we can consider all digestive glands present in alimentary canal, gall bladder and endocrine glands as Pittashaya.\[7\]

**Kaphashaya:** Means site of Kapha in the body. Main function of Kapha is like functions of water in the body eg.- snehan, avalamban, Sandhi sanshleshana. Properties of Kapha is given as, oily, liquid, whitish in colour. If we observed the functions of Kapha, it is mainly related to various secretions in the body either watery or mucous. From properties and function of Kapha, we can compare with: 1) The serous and mucous secretions produced by serous and mucous glands in the body. 2) synovial fluid in synovial cavity is the main cause for free movement of joints in the body. Its function and properties can be compared with Kapha dosha. 3) aqueous and vitrous humour in chambers of Eye 4) Secretion of Lacrimal gland 5) CSF in ventricles is important for nutrition of nervous system, as a shock absorber for CNS. These function are similar to Kapha dosha. So, we can consider serous and mucous glands, synovial cavities, chambers of Eye, Lacrimal gland, ventricles in brain, as adhishthana of Kapha.\[8\]

**Raktashaya:** Means site of Blood storage in the body. Yakrut and Pleeha are given as adhishthan of Rakta. As per modern science, Blood is stored in Liver. In foetal life it is also stored in Spleen. After birth, this function of spleen is seen only in animals. So, Liver and Spleen can be considered as site of Rakta.\[9\]

**Amashaya:** Means the site of partially digested food in the body. Site where Undigested food is present during process of pachana. It is seen in Amashaya and Grahani. According to modern science, digestion is completed in duodenum. So, Amashaya and grahani i.e. stomach and duodenum respectively can be considered as site of partially digested food.

**Pakwashaya:** Means site of fully digested food in the body. Site where digested food is present during process of pachana. It is seen in Antra. According to modern science, digested food is propelled in jejunum from duodenum. So, part of Small intestine except duodenum and whole large intestine can be considered as site of fully digested food.

**Mutrashaya:** Means site of Urine storage in the body. According to Sushrutcharyya, Its shape is like a gourd. Basti can be considered as site of Mutra where mutra is continuously stored. According to Sushruta, Basti is the site of Mutra. From the shape and function of
Basti, it can be compared with Urinary bladder which continuously stores urine. So, Urinary bladder can be considered as adhishthan of Mutra.\textsuperscript{[10]}

**Garbhashaya:** Means site of Garbha in the body. It is additional ashaya present in female for Garbha. It can be considered as Garbhashaya where garbha remains till prasava avastha starts.

**DISCUSSION**

**Pittashaya**

If we observed the function of Pitta, it is mainly related to pachana which includes the digestion, transformation. Pitta prepares material to be absorbed or metabolized at macro or micro levels.\textsuperscript{[11]} Hormones are essentially chemical molecules (proteins for example), which cause a change in cellular metabolism.\textsuperscript{[12]} The hormones are produced by endocrine glands. Hormones are responsible for various metabolism. This function is seen in chemical activities like digestion and assimilation. The Pittashaya is said to be located between Amashaya (stomach) and Pakwashaya (large intestine, transverse colon to be precise in this context). Gall bladder should be considered to be Pittashaya. Again though there are many sites of a Pitta, Pittashaya is said to be one of the predominant sites of Pitta (Nabhi or umbilicus is said to be the chief site of Pitta, Gall bladder falls in the approximate region of Nabhi). Pittashaya is observed as the ashaya or organ cavity where Pitta resides for the appropriate functions of digestion of food. Anatomical description of Pittashaya is not described by Acharya Sushrut but Dr. Ghanekar commentary on Sushrut has stated that Pittashaya may be liver, Gall bladder and Pancreas where Bile and powerful secretions richest with enzymes and secreted and helps in the digestion food.

**Location of Pittashaya According To Ayurveda**

In other reference given by Acharya Sushrut it is observed that ‘Pachaka Pitta’ or ‘Pachakagni’. Amashaya is the Ashaya where Apkwa Anna (undigested food) resides for digestion where as Pakwashaya is the ashaya where Paripakwa Anna (foods after digestion) traverses. According to D.S. Gaur Amashaya and Pakwashaya resemble to stomach and large intestine respectively and Pittashaya is observed as located between Amashaya and Pakwashaya. According to D.S. Gaur Pittashaya may resembles to digestive tube with its appendages and small intestine. According to Sharangdhar Shelshmashaya is located in Uras Pradesh (chest region) below which is Amashaya. Below the Amashaya in the left of Nabhi (umbilicus). Agnyashaya is located above Tila is present. After Agnyashaya, Pakwashya is
located below which is Malashaya. D.S.Gaur has commented on Shrangdhar states that the Amashaya, Agnyashaya, Pakwashaya, Malashaya may resemble to stomach, small intestine, colon and rectum respectively. Pittadharaka kala or grahani is internal lining membrane of small intestine. According to Acharya Charak Amashaya which is the seat of Pitta extends from stana to nabhi. D.S. Gaur has commented that is the stomach and jejunum. Chakrapanidutta has clarified it and states that Amashaya may be divided in two parts;Urdhamashay and Adhoamshaya. Urdhvamashaya is seat of Kapha whereas Adhoamshaya is seat of Pitta. According to C. Dwarikanath Adho-amshaya may be called as Pachyamanashaya where food is digested and may resembles to small intestine.

**LOCATION OF PITTAshAYA ACCORDING TO MODERN**

According to Modern Anatomy gastrointestinal tract is observed as the large tract extending from mouth to Anus through the ventral body cavity. Organs composing the gastrointestinal tract include the organs oesophagus, stomach, small intestine and large intestine. The gastrointestinal tract contains the food from the absorbed or prepared for elimination. The accessory digestive structures include – the teeth, tongue, salivary glands, liver, gall bladder and pancreas. Among the accessory structures secretions from gall bladder and pancreas open into second part of duodenum through the ampulla of vater. So, we can consider all digestive glands present in alimentary canal, gall bladder and endocrine glands as Pittashaya.

**EMBRYOLOGY OF PITTAshAYA**

Part of Gastrointestinal tract (Mahastrotas) where enzymes rich secretions are present to make the digestion of foods, absorption of nutrients and separation of residual part of food with its appendages may resembles to Pittashaya. It is the part of foregut and midgut extending from stomach, end of small intestine including with liver, pancreas and gall bladder.

**CLINICAL IMPORTANCE OF PITTAshAYA**

When aggravated pitta in annavahasrotas (GIT) gets vidagdha and attains more sourness causing. Amlapitta which resembles to Hyperacidity inn gastrointestinal tract. Hyperacidity is a condition in which level of acid in the gastric juices is excessive, cavity discomfort may leads to ulcer in stomach where mucosa get eroded. Annadravashola is one of the disease of alimentary canal in which there is colic occurs after digestion, during digestion or at any time it can be compared with Gastric ulcer in which patient feels relief after vomiting. Pain in abdomen is due to transformation of the food is called Parinamshoola. It may be duodenal
ulcer in which excess acidic secretions damage the mucous layers of duodenum. When Agni which resides in Pachak pitta and located in grahani becomes mandagni then improper digestion of ingested food leads pathological condition termed as Grahanı roga. Irritable Bowel Syndrome(ibs) is also termed as a group of symptoms and uncomfortable gastrointestinal disorder. It may resemble to Grahanı roga.

CONCLUSION
The Ayurvedic approach regarding human body is based on some principles which help to understand the fact of Anatomy as well as physiology. Koshtha-Koshthanga Ashaya are one of the Ayurvedic principles which are described sequentially in sharir sthana. Koshtha reflects to the human body cavities where organs reside and which allows for significant changes in the size and shape of the organs as they perform their functions. Koshthanga are the hollow and solid organs in cavity. Whereas Ashaya are the organs with cavity where substances(ras, rakta etc.) can stay for appropriate functions. Mahagarbhashaya and Alpgarbhashaaya reflects to large cavity organs and small cavity organs respectively. Agarbhashaya reflects to the organs having no space. Part of Gastrointestinal tract (Mahastrotas) where enzymes rich secretions are present to make the digestion of foods, absorption of nutrients and separation of residual part of food with its appendages may resembles to Pittashaya. It is the part of foregut and midgut extending from stomach, end of small intestine including with liver, pancreas and gall bladder. In the stomach gastric glands of fundus and both have the important role of producing digestive gastric juice. Located over the entire surface of the small intestine are crypts of liberkuhn which secrete intestinal juice rich in digestive enzymes. Brunner’s glands is located in the first few centimeters of the duodenum, mainly between the pylorus and the ampulla of vater with the pancreatic juice and bile empty into the duodenum. Pancreas, liver and gall bladder form embryologically from the foregut they develop as outgrowths of the endodermal epithelium of upper part of the duodenum. The gastric and intestinal secretions including the pancreatic secretion and bile secretion especially present in the duodenum resemble to Pachaka Pitta. Due to presence of enzymes and other substances(powerful HCL, bile, acids and base) Pachaka Pitta digest the food substances whereas its Tejas components or heating agency due to its fiery property absorbs the nutrients and is called ‘Pachakagni’. Harmones and Prosthetic group of enzymes in the intestinal tract may be considered as Agni which resides in Pachaka Pitta. Intestinal harmones, responsible for exciting the powerful digestive juices (from stomach, pancreas,
liver) necessary for proper digestion of food. So, we can consider all digestive glands present in alimentary canal, gall bladder and endocrine glands as Pittashaya.

ACKNOWLEDGEMENT

The author wish to acknowledge hearty and sincere thanks to Dr Sunita Kumari, Reader, Head Of the Department P.G. Department of Rachana Sharira, State Ayurvedic College & Hospital, Lucknow and Dr. P.C. Chaudhary, M.D. (Ay.) & Ph.D. (Ay.) Kaya Chikitsa, Reader, H.O.D. P.G. Deptt. of Rog Nidan, State Ayurvedic College & Hospital, Lucknow and Dr. Ashok Bhagat, M.D. (Ay.) Kayachikitsa Lecturer, Deptt. of Swasthvrita & Yoga, State Ayurvedic College & Hospital, Lucknow. It is indeed my duty to remember and pay my sincere, regards to Principal/Dean Prof.P.C. Saxena State Ayurvedic College and Hospital, Lucknow, for his blessings and co-operation this work and also thanks to my Department faculties. I acknowledge all colleagues, parent and teachers who helped a lot in making this article very effective.

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12. website: for articles related to harmones.