

A REVIEW STUDY OF RAKTASHAYA AND ITS MODERN CO-RELATION

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ABSTRACT

Rachana Sharir (Anatomy) is one of the important topic to understand the anatomical structure of human body from ayurvedic perception. There are various peculiarities of ayurvediya rachana sharir; which includes concepts of srotas, marma, koshtanga, aashaya, etc. Aashaya sharir includes the description of various aashayas or organs or the structural cavities present inside the human body. Different numbers of aashayas have been described in ayurvedic classical texts. The numbers of aashayas differ in males and females. Among all the aashayas, 'raktashaya' is a less touched topic. Since raktashaya is related to an important constituent, that is, 'rakta' which also means life; hence the detail understanding of raktashaya is very important. This article deals with ayurvedic concept about 'raktashaya' and also its co-relation with modern science.

KEYWORDS: Aashaya, Raktashaya, Yakruta, Pleeha, Rakta.

INTRODUCTION

Each and every organ or structure present inside the human body has its own significance. For the normal and optimal functioning of the human body, certain cavity filled spaces are present inside the body, which are referred to as the 'aashaya'.

Meaning of 'aashaya': Those places or sites which are the seats of vaatadi doshas, they are known as 'aashaya'.

Definition of 'aashaya': According to Dalhan acharya, those sites which hold in place the

rasaadi dhatus, vaatadi doshas and purishadi mala in their normal or balanced state ; such sites are called ‘aashaya’.^[1]

Lakshan of ‘aashaya’

- A certain place or a space inside which a particular thing stays that place is known as ‘aashaya’.
- The residing place of doshas, that is, the sites where predominantly the vaatadi doshas are present; such sites are called as ‘aashaya’.
- A cavity or a spacious place can be known as ‘aashaya’.

Importance of ‘aashaya’: According to acharya Shri Gananath Sen; along with modern thoughts, he stated that the base or the support of the anna(food) – mala, mutra, etc. is known as ‘aashaya’. All the functions in the human body originate from these aashayas only. Hence, these are also known as ‘shariravayava’ or ‘sharir yantra’.

Classification of ‘aashaya’: From modern science point of view Shri Gananath Sen has classified aashayas as follows –

- 1) **Sagarbha ashaya** – Those aashayas inside whom there is an empty space.
- 2) **Agarbha ashaya** – Those ashayas inside whom there is no empty space.

Again sagarbha ashaya is subdivided into two parts:-

- Maha garbhashaya – These aashayas have more empty space inside them. These include aamashaya, pakwashaya, mutrashaya, garbhashaya, etc.
- Alpa garbhashaya – In these aashayas there is very little empty space. These include vrukka, mastishka, etc. Due to the presence of numerous small- small empty spaces inside them, the phuphusa are also included in ‘alpa garbhashaya’.

Agarbha ashaya – Yakruta, pleeha, etc are included in ‘agarbha ashaya’.

Among these ashayas, the maha garbhashayas are usually named after the name of the substance which are filled inside the maha garbhashayas. Eg. The aashaya filled with aam or indigested or raw food is known as ‘aamashaya’.^[2]

Description and numbers of aashayas as per different classical texts

Vagbhata:- Raktashaya, kaphashaya, aamashaya, pittashaya, pakwashaya, vayawashaya and mutrashaya are the seven support systems or organs, that is, aashayas which are formed in

this synchronized order. In females, behind the pittashaya and in front of the pakwashaya, 'garbhashaya' named eighth aashaya is formed. Hrudaya, kloma, phuphusa, yakruta, pleeha, unduka, vrukka, nabhi, dimba, antra and basti; these parts of the koshtas are also present adjacent to the above mentioned aashayas.^[3]

Sushruta:- Aashaya, that means the hollow viscera are as follows- Vaatashaya, pittashaya, shlemashaya, raktashaya, aamashaya (stomach), pakwashaya (intestines), mutrashaya (urinary bladder); and in females garbhashaya (uterus).^[4]

Sharangdhara:- sapta (seven) ashaya- shlemashaya, aamshaya, agnyashaya, kloma, pavanashaya, mutrashaya, jeevaraktashaya, that is, aashaya of jeeva rakta.- it is in the ura Pradesh. This jeevaraktashaya is hrudaya. Thus there are total seven aashayas; as compared to males, in females there are three additional aashayas- one is garbhashaya (uterus) and two stanyashaya (breast).^[5]

DISCUSSION

Raktashaya

Yakruta and pleeha are the roots of the raktavaha srotas. According to vagbhata acharya, hrudaya itself is known as the 'raktashaya'.^[3]

According to Sushruta, yakruta and pleeha are the main sites of rakta, so they are considered as raktasthana. Rakta is occupied in the whole body just like the tridoshas, hence there is a fixed adhishtana of rakta. Being present predominantly in yakruta (liver) and pleeha (spleen), rakta nourishes the remaining sites in the human body. Whenever there is deficiency of rakta, then according to the requirement, rakta is derived from its aashayasthana, where it is stored collectively. From modern point of view also yakruta and pleeha are considered as the reservoir of rakta (blood), as mentioned in physiology in health and disease by C. Wiggers.

In short, we can state that inside human body other than yakruta and pleeha there is no other organ or place where rakta is collectively stored and from where it can be derived. This is the reason why the term 'Raktashaya' means yakruta and pleeha.

According to Haranchandra, raktashaya refers to twachadi avayava.^[2] Sharangdhar has also described the location of each aashaya. While doing so he has stated that jeevaraktashaya (hrudaya) is located in the uroguha.^[1] In the topic of aashaya mentioned in Sharangdhara Samhita's Aadhamalla commentary, it is written that jeevaraktashaya refers to life-like rakta,

whose aashayasthana is pleeha, which is situated at the left side of hrudaya.^[2]

According to almost all acharyas in ayurveda, this principle is accepted that yakruta and pleeha only are the main sites of rakta dhatu.^[1]

Modern co-relation^[6]

Heart

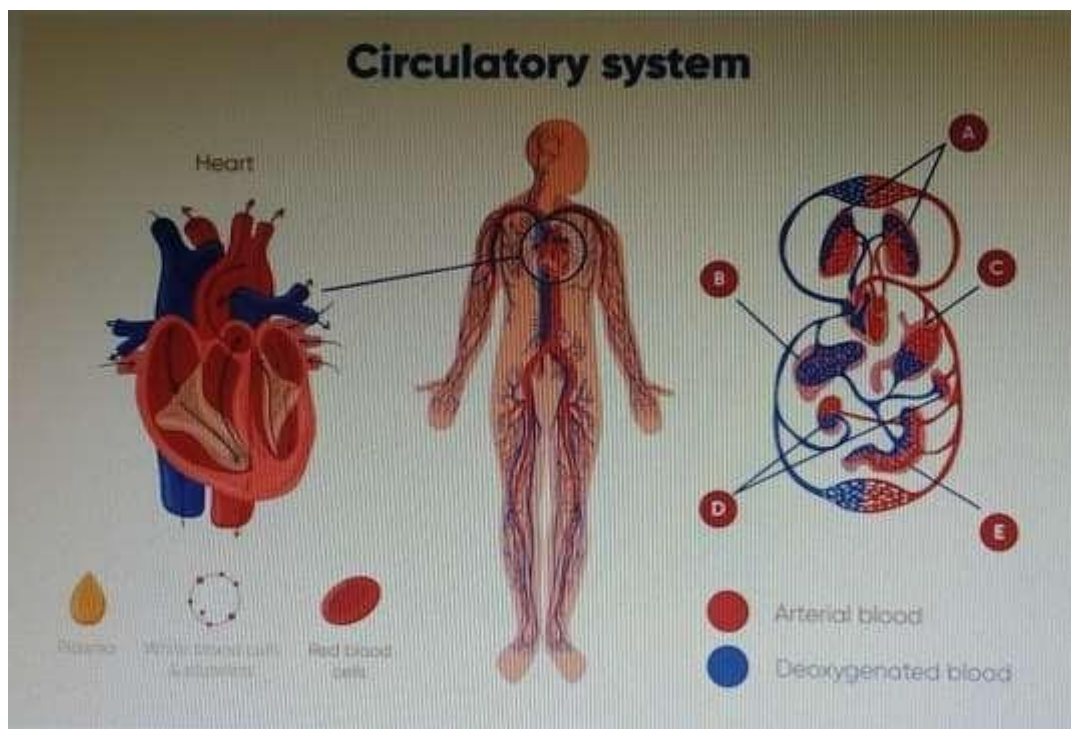


Fig. 1: Hrudaya (Heart).

The cardiovascular system is divided for descriptive purposes into two main parts:-

- 1) The circulatory system- it consists of heart which acts as a pump; and the blood vessels through which the blood circulates.
- 2) The lymphatic system- it consists of lymph nodes and lymph vessels, through which the colourless lymph flows.

Blood- It is a connective tissue that provides one of the means of communication between the cells of different parts of the body and the external environment. Eg. It carries—

- Oxygen from lungs to the tissues and carbon dioxide from tissues to the lungs for excretion.
- Nutrients from the alimentary tract to the tissues and cell wastes to the excretory organs.
- Hormones to their target organs.

- Protective substances like antibodies to the areas of infection.
- Clotting factors that coagulate blood, minimizing its loss from ruptured blood vessels.

Formation of haemoglobin- Haemoglobin is a complex protein consisting of globin and an iron-containing substance called haem; and it is synthesized inside the developing erythrocytes in red bone marrow.

Liver

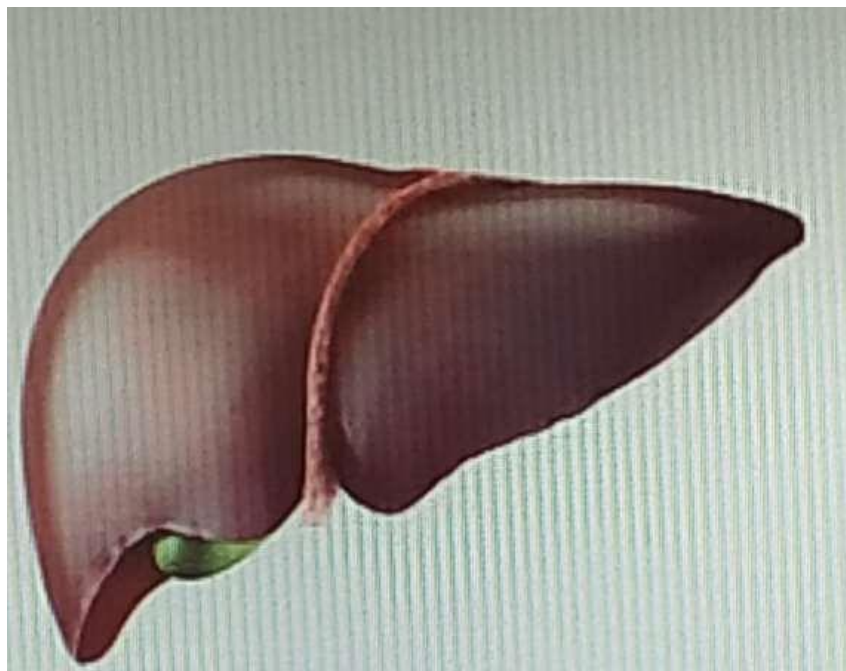


Fig. 2: Yakruta (Liver).

Functions of liver include

- **Secretion of bile:** The hepatocytes synthesize the constituents of bile from the mixed arterial and venous blood in the sinusoids. These include bile salts, bile pigments and cholesterol.
- **Storage:** The substances stored in liver include-
 - i. Fat-soluble vitamins: A, D, E, K
 - ii. Iron, copper
 - iii. Some water soluble vitamins like riboflavin, niacin, pyridoxine, folic acid and vitamin B12.

Spleen

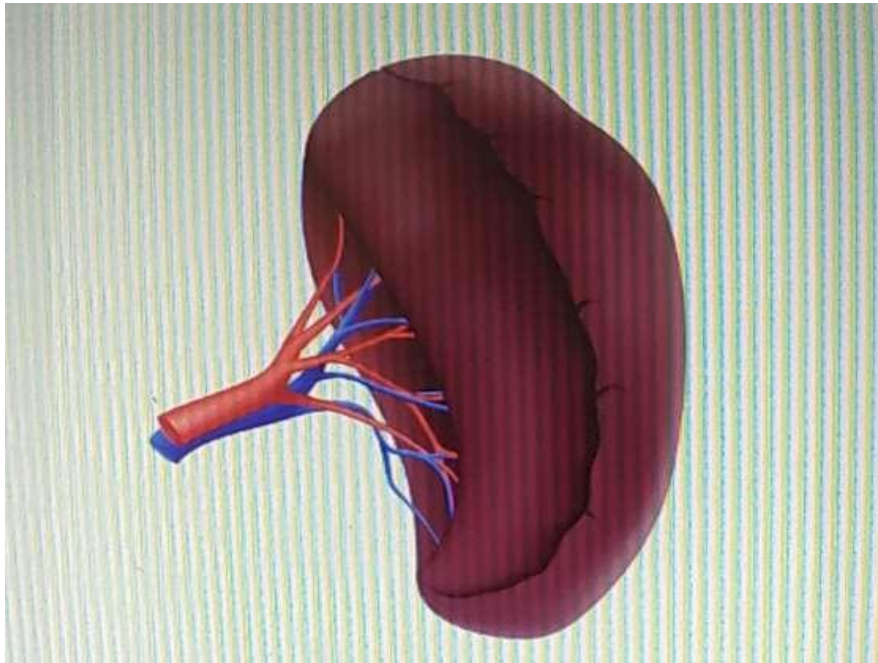


Fig. 3: Pleeha (Spleen).

Function of spleen includes storage of blood. The spleen contains upto 350 ml of blood, and in response to sympathetic stimulation it can rapidly return a large part of this volume to circulation, eg. In haemorrhage.

CONCLUSION

As per ayurvedic classical texts we come to know that ‘aashaya’ is a cavity which is the aadhar or the support of the content that is present in it. Each and every aashaya is named according to the constituent which the aashaya holds inside itself. Thus, ‘raktashaya’ means the aadharsthana or reservoir of rakta(blood). Yakruta(liver), pleeha(spleen) and hrudya(heart) – all three are closely related to rakta. According to modern science, iron is stored in liver. Iron is an important element required for haemoglobin formation.

Haemoglobin is the main constituent of blood. So indirectly liver can be considered as ‘raktashaya’. One of the functions of spleen is to store blood and it also returns large amount of blood into the circulation as and when required by the body. Thus spleen can also be considered as raktashaya. The main function of heart is to pump blood(rakta) into the whole body and for this reason blood remains inside the heart for a certain time period.

Hence in my opinion heart, liver and spleen all of them come under the roof of the term ‘raktashaya’; but spleen can directly be co-related with the term ‘raktashaya’, as per

ayurvedic and modern science.

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