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Review Article

Concept of *Urastha Hridaya* (Heart) According to Ayurveda

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ABSTRACT

Hridaya (heart) is considered as one of the vital organ of the body by Ayurveda. Since it is one among the *Trimarams* and is regarded as *Dasha prana ayatana*, any injury to the *Hridaya* results in causation of grave diseases, severe complications or and even death. A vigilant study reveals that, two organs share approximately equal claims to put themselves identical with the term *Hridaya* which denotes an organ controlling the passage of *Prana* by collecting, distributing in a rhythm. At one end is the notion that *Hridaya* refers to brain, at the other end of the scale, it is the view that *Hridaya* is heart. As per Ayurvedic text, *Hridaya* is not only an organ that pumps blood, but also something with much wide area of action. Ayurvedic classic mentions that *Hridaya* is that which controls body, mind and senses, in addition is a seat of the intellect and vitality. Therefore it is essential to understand this organ thoroughly; however, *Acharya Charak* and *Acharya Sushruta* considered *Hridaya* as one among the *Kosthangas* and one among *Kosthas* respectively. These descriptions certainly indicate *Hridaya* as the '*Urastha hridaya'.* The present review article draws attention towards the concept of *Urastha hridaya* i.e., heart considered in Ayurveda.

INTRODUCTION

The term '*Hridaya'* was first described in *Atharva Veda* and was considered as an organ system including *Shirasthahridaya* i.e., brain (cranial hridaya) and *Urasthahridaya* i.e. heart (thoracic hridaya). *Yogvashishtha* clearly mentions that there are two *Hridayas*, one is thoracic and other is in head**.** The word '*Hridaya'* is derived from three *Dhatus* (verbs) as per *Satpathbrahman* and *Brihadaranyak* viz, '*HRU*'- means *Harati* (to receive from) or to abduct, '*DA'*- means *Dadati* (to give) or to donate. '*YA'*- means *Yagati* (to control) or 'in gatou' self generated rhythmicity for contraction and relaxation.

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Thus the word *Hridaya* itself expresses its function, i.e. *Hri-* the suction activity of *Hridaya* (i.e., venous return), *Da-* he pumping activity of *Hridaya* (i.e. supply of oxygenated blood), and *Ya-* control of these above two functions. Thus *Hridaya* is the organ in the body which receives, gives out and is in a state of motion, the indication is to the organ heart. The *Hridaya* is engaged in contraction and relaxation ceaselessly during waking and sleep. This action continues even during sleep albeit at a slower pace but continue it does.

The concept of *Hridaya* is well illustrated in '*Arthe Dash Mahamuliya Adhyaya'* and '*Trimarmiya Adhyaya'* of *Charak Samhita* and in '*Garbh Vyakarana Shariropkramnitya Adhyaya'* of *Sushrut Sharir Sthana*. The *Hridaya* is a type of *Siramarma* (based on constitution)[1] as *Hridaya* gives *Rasa*, *Rakta* and *Oja* to entire *Srotas* of the body through *Siras* like that of the mountain ranges which provide water and by this

means nutrition and life to the whole world through rivers.[2] *Vagbhata* has stated *Hridaya* as *Moola* of *Siras*[3] and *Sira* are *Rakta-updhatu*. It is *Sira marma* since *Sira* (vessels) is the result of interaction between *Rakta* and *Medas*, the abundance of vessels is obvious in the heart. According to Ayurveda, the *Hridaya* originates from the essence of *Shonita* i.e., *Rakta* and *Kapha* and develops into a muscular organ (which can be correlated with myometrium). [4]

Marmas are the points spread over the human body where all the twelve *Pranas* reside in various concentration (*Prana sthana*) so they are vital for continuation of life processes. *Shiras* (head), *Hridaya* (heart) and *Basti* (urinary bladder) are *Trimarmas*. Even today cerebral death, cardiac arrest and renal failure ultimately lead to death. *Acharya Charak* also designated *Hridaya* as one of *Trimarma* and *Dasavisheshaayatana*,[5] and *Acharya Shushrut* mentioned *Hridaya* as *Marma sthan* of *Sadhyapranhar* variety (based on prognosis of injury i.e., vital organ and if affected, may cause instantaneous death) [6]. They have concluded this region as *Pranayatan*. The word *Pranayatana* is formed by two words – *Prana* (life) and *Ayatana* (*Ashrayasthana* -Seat). Accordingly *Pranayatana* is a vital part of the body and is a seat of life therefore its trauma or complication lead to death. *Hridaya* was also stated as *Pranayatan* and *Mahamarma* by *Acharya Kashyapa*.[7] It is the site of *Chetana* and *manas* as well as all the other *Pranas* hence it is considered as *Mahamarma* by *Charak*. This *Urastha hridaya* in *Samhitas* was considered to be hollow organ an *Aashaya*, [8] and a *Kostha*[9] as per *Sushruta* and a *Kosthanga*[10] as per *Charaka* and *Vagbhata*.

While describing the location, *Acharya Sushruta* states that *Hridaya* is situated in between the two breasts, in the chest above the mouth of the stomach. Moreover while explaining *Garbh Vyakarana Sharir* (embryology) he states that *Pleeha* (spleen) & *Phuphus* (lung) are placed below the left side of the *Hridaya* whereas *Yakrut* (liver) and *Klome* (mediastinum) are situated below the right side of the *Hridaya***.** Similarly *Aacharya Sharanghdhar* mentioned that *Hridaya* is located in the thorax between breasts.

The dimensions are about 4 *Anguli* or about the size of individual's fist. It is made up of *Bahala* and *Shlakshna* type of two *Peshis* as it has to initiate its work in mother's womb and continues ceaselessly throughout the life till death. Therefore heart has very complex and efficient muscle structure. It has three *Mandala Sandhis*. The valves are circular in nature and control the flow of *Rasa Rakta* complex in and out the flow of the heart. *Sushruta* has called these as *Sandhi*/joint as they permit unidirectional movement of body constituent. In *Aamavata* mobile joints are swollen and painful and its complication is valvular disease of heart.

It has a shape of *Adhomukha pundrika,* i.e, inverted lotus whose apex is directed downwards.[13] Ten *Mahadhamanies* i.e., pulsating vessels are connected to it which supplies blood, nutrition, oxygen and thus immunity to the entire body.

Thus above references clarifies the matter once and for all and resolve the controversy about the cranial and thoracic heart. Therefore it can be stated that anatomically, physiologically and functionally *Urasthahridaya* is similar to that of heart.

Genetically, it is the maternal organ [14] meaning that the heart forming part of the fertilized ovum comes from the mother as it is soft, pliable, contractile and expansible. In the second month of intrauterine life the heart bud is produced from the clear and pure portion of *Rakta*, *Mansa* and *Kapha*. By the fourth month the evolution of full fledge heart from a bud is completed [15] and then the mother is known as *Dvihridaya* (one who has two hearts). Since it is the abode of *Atma*, *Manas*, it reveals various desires called as *Dauhrida* which should be fulfilled. Failure to fulfill them could result in congenital diseases including cardiac disease.

Hridaya* and *Dosha-Dhatu* and *Mala

The functions of *Hridaya* are due to *Vayu*, specially *Prana* and *Vyana vayu*.[16] Furthermore, *Hridaya* is *Sthana* of *Sadhak pitta,* [17] *Avalambak kapha*[18] and *Oja.* [19]

Prana vayu accounts for dilatation of the chamber, valves, generate and carry cardiac impulse (*Praspand)* and diastole of the cardiac cycle. In addition to this, it is related with an acceptance of the *Rasa Rakta* complex in the heart (*Aadaan*). The vitiation of *Prana vayu* results in dilated cardiopathies or conduction defects. According to *Aacharya Sharangdhar*, *Prana vayu* brings *Amberpiyush* means oxygen inside the body by every inspiration and *Udaana vayu* gives *Bala* (energy) to cardiac muscles.

Udaana vayu is accountable for the force required to push the *Rasa Rakta* complex along the Aorta (*Mahadhamanee*), in combination with *Vyan* (*visarga)*. It is also responsible for the contraction of chambers, systoles and closure of the valves. The vitiation of *Udaana vayu* leads to hypertrophy of ventricles.

The *Vata* system mainly *Vyana vayu* controls its rhythmicity as well as contraction and relaxation which continues lifelong in a cyclic manner.[20] The concurrent rise in heart rate along with increased body activity occurs owing to the action of *Vyana*

vayu which represents its entire nervous control of circulation.[21,22] *Vyana vayu* is the resultant of the *Prana and Udana* activity in the heart and it is more powerful than parent *Vata* types. *Vyana vayu* can travel in three directions i.e., Upwards Archis (heart to head and back), horizontally (portal circulation) and downwards (peripheral circulation). It is responsible for the circulation of *Rasa Rakta* complex from the heart to the body along various channels. It accounts for all the voluntary actions.

Samaana vayu has indirect influence on the heart by reaching the first nutritive fluid i.e. *Rasa dhatu* from digestive process in the gut to the heart.

Sadhaka pitta resides in the heart, derives its nourishment from the *Pachakapitta* and it is responsible for fulfilling the desires of the mind [23]. It accounts for the mental faculties like intellect/ *Buddhi*; *Medha*, *Ahmkaara* (ego), *Shourya* (courage, bravery), *Bhaya* (fear), *Krodha* (anger, rage), *Harsha* (excitation, cheerfulness) and *Moha* (delusion, fainting).[24,25] For that reason for in some stages of *Hridroga* mental signs and symptoms are observed. Disorders of *Sadhaka pitta* result in weak action of *Hridaya* leading to different cardiac disorders owing to defects in conduction system of the heart (*Hridbadha*) and ultimately heart failure (*Hridroga*). [25]

Panchaka Pitta is located in the *Pachyamanashaya* (small intestine); its main function is digestion and production of *Aahar rasa*. It also provides nourishment and strength of other *Pitta* types spread all over the body.

Avalambaka Kapha is situated in the heart itself and it accounts for smooth functioning of it by maintaining its nourishment level, supporting lubrication provided to *Hridaya* by the pericardial fluid and synovial fluid to the thoracic joints (*Trikpradesha*), preventing friction between two cells as well as between *Hridaya* and other organ in the *Kostha* (mediastinum) and the replenishing fluid to the fluid systems of the body. [26] To perform this function, it receives the essence of *Aaharrasa* (*Anna veerya*) and its own potency. Pericardial effusion, pleural effusion and pulmonary oedema also result from disorders of *Avalambakakapha*. [26]

It is the origin of *Pranavaha srotas* (channels or passages of life/air/respiration) and *Rasavaha srotas* (channels carrying *Rasa*-nutrient tissue[27,28]. The *Aahar Rasa* is converted into *Rasa Dhatu by Rasavaha srotas* which provides nourishment to all other body constituents. Thus *Rasa Dhatu is* the first tissue developing from the nutritive fluid *Aahar Rasa* [29] The qualities of *Rasa dhatu* like *Drava* (liquidity), *Snigdha* (unctuousness), *Manda* (dullness) help it to please (*Preenanam*) the body, provides nutrition (*Tushti*), conserve (*Dharana*) the body, and nourish *Raktadhatu.* [30,31]

Rasa Rakta complex is essential for continuation of life. *Hridaya* evolves from clear part of *Rakta* and *Kapha*. *Raktadatu* is responsible for *Jeevana karma*, sustaining the life process by supplying *Prana* to all over the body constituents. It circulates along with *Rasa* all over the body with the help of *Vyana vayu.* It provides immunity, complexion, satisfaction and longevity. Hence proper protection of *Raktadhatu* is essential to safeguard life[32,33,34]. Since the fluid circulating in the *Dhamanis* and *Siras* is a composite whole and a complex flowing tissue, the differentiation between the circulating *Rasa* and *Rakta* cannot be made.

The chordae tendinae (made of which fibrous tissue i.e. *Snayu*), valves, vessels, ligament, tendons and pericardium evolve from *Rakta* and *Meda*

Shukra dhatu is not only the reproductive tissue but also it has rejuvenative function as *Shukradhara kala* spread all over the internal environment encompassing all the body constituents including heart.

The depletion in *Purish* (stool) causes reversal of *Vayu* which leads to pain in cardiac region.

The Process of Circulation

Aacharya Bhela described the process of circulation for the first time. According to him the blood [*Rasa Rakta* complex] is first ejected out of the heart, it is then distributed to all parts of the body, and after that, it returns back to the heart through the blood vessels recognized as '*Sirah'.* [35] Any derangement in these (either structure or function) is responsible for *hridroga*. From the *Ahararasa*, the body fluids carrying nutrients for all *Dhatus* i.e., the first *Dhatu* (*Rasa*) is derived. It passes from intestines into blood vessels and then *Samanvayu* brings *Rasa* to *Hridaya* from where it is pumped through its main blood vessels by the action of *Vyanvayu* into millions of capillaries. The *Rasa* penetrates all the tissues and cells of the body from capillaries. The fluid from the tissues is brought back to the *Hridaya* by capillaries and veins. [41]

Hridaya* and *Srotas [37]

Srotas is a space within internal environment capable of trans-membranous movement of various body constituents across them like accepting the nutrient fluid processing it to yield various products and disposal of the waste. Heart is the only organ that has characteristic feature of being *Srotomoola* of two equally significant *Srotasas* i.e., *Pranvaha* and *Rasavaha Srotosas*.

Circulation of *Oja*

After metabolism of ingested food by the action of various *Agnis*, the *Shukra dhatu* emerges and the residual matter along with the pure part of *Dhatu* metabolism together is termed are *Oja*. It is the essence of food in addition to metabolism on *which* strength (*Bala*) depends. It protects life against various diseases, decay and degeneration and supplies energy to different tissues. [38] *Para Oja* is generated at the time of fertilization and looks after the fetal growth from conception till the beginning of eight month of intrauterine life. From then the *Apara Oja* is generated and takes over the function of sustaining life. Both the type of *Oja* resides in the *Hridaya*. The former i.e. *Ashtabindwatmaka oja* is in extremely small quantity i.e. eight drops while the later i.e. *Shlaishmika oja*, is in the quantity of half *anjali.* The activities of *Hridaya* in the *Garbha* (foetus) begin when the *Oja* which is nourishing the *Garbha* enters *Hridaya* which is being formed in *Garbha*. [39] Charaka says: "The *Dashamahamulak dhamanis* are the channels of transport of *Ojas* to entire body. They are known as *Dhamanyah* as, they pulsate. They are called as *Srotamsi*, for the reason that, they permit the exudation (filtration, diffusion, permeation). They are also named as *Sira* since; they maintain a steady (and continuous) flow of *Rasa-rakta*." [40]

Gangadhar interprets the word *Mahaphala,* the synonym of *Hridaya* as 'that which fruits *Mahata* (importance)'. Since *Oja is* seated in heart, it is named as *Mahaphala*. *Yogendranath* states that *Hridaya* is termed as *Mahaphala* since its function of carrying *Oja* is of huge importance. The heart thus pumps *Rasa* i.e. fluids and nutrients, *Rakta* and *Oja* i.e., vital fluids to all the tissues and organs of the body. Hence life, vitality, consciousness, functioning of sense organs, mind and intellect and indirectly happiness and sorrow depend on the proper functioning of the heart.

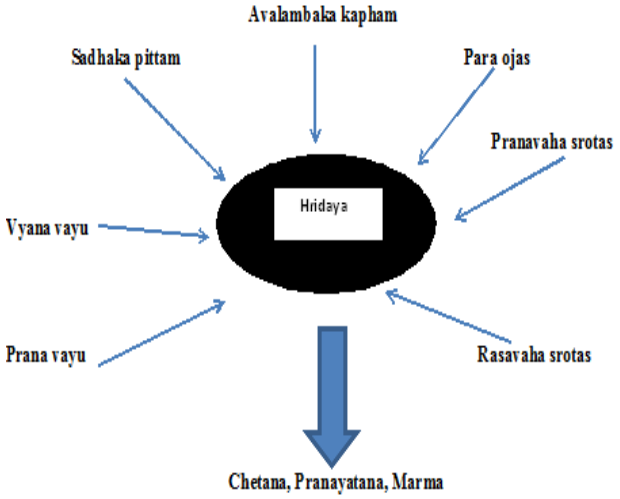
Charaka mentions the *Hridaya* as the *Chetanaadhishthana Avayava* whereas *Sushruta* and *Sharangadhara* state it as the *Chetana Sthana*. It is the site of origin of cardiac impulse, owing to which it harbors the *Aatmikgunas* like *Dhnyan*, *Vidnyas*, *Icchaa*, *Dvesha*, *Sukha*, *Dukkha*, *Prayatna* body complex; it expresses various desires which are gratified by the mind-body apparatus.

The automatic and self-controlled pulsations of *Hridaya* denote the perception of *Chetana*. And hence *Hridaya Marma* if injured or disordered than it leads to stopping of the chain of *Chetana (Chetananiuritti Ayu)*, resulting in death. [41, 42]

The heart harbors the *Manas* (*Satva-Rajas-Tamas*); the three attributes. *Satva* signifies piousness, purity, rationality, devotion to knowledge acquisition and dissemination etc. *Rajas* signifies initiative, enthusiasm, proficiency at picking up languages, spontaneity of emotions etc. while *Tamas* signifies lethargy, ignorance, indulgence in basal instincts like food, sex and sleep and shabby behavior. These attributes are found in the *manas*, the representative of the primordial *Prakruti* which are sequentially present in the products of the evolutionary process at the beginning of every life process and *Rasa dhatu* is capable of bringing about conception by providing the internal environment which is conductive for it, hence any affliction of the *Rasa* is reflected on the mental plane and vice versa. [37]

Aahar rasa is capable of generating all the seven *Dhatus*. The clear channels facilitate *Dhatu Poshana* (Tissue nourishment) in addition to production of *Ojas* (a factor which increase immunity). Failure of *Agni* (Hypofunctioning/*Mandagni*, hyperfunctioning/ *Teekshnagni*; erratic functioning/ *Vishmagni*) give rise to toxic transient metabolite called *Aama* which shows a special ability to cause occlusion of various spaces and channels in the internal environment. Because of presence of *Aama*, the *Dhatu* (tissue) metabolism suffers and results in malnutrition and a battery of diseases; *Hridroga* being one of them. The normal functioning of heart depends upon equilibrium of the *Doshas* present in the heart. Vitiation of any of them results in causation of heart diseases. Any of the eight basic elements viz. *Rasa*, *Rakta, Mansa dhatu, Oja, Pranavayu, Vyana-vayu, Sadhaka pitta* and *Avalambakakapha* when affected, can disturb the function of the *Hridaya* and cause *Hridroga*. [43] The functioning of heart is a complex phenomenon. The synchronization among all these factors is important for sustenance of life process.

Figure: Factors Making *Hridaya* Vital [44]



DISCUSSION

The word *Hriday* consists of three syllables, i.e. hri+da+ya=*Hriday*.

1. HRU for *Harati* i.e., to receive from or to abduct,

2. DA for *Dadati* i.e., to give or to donate, and

3. YA for *Yagati* i.e., control of these above two functions i.e. receiving and donating (*Yama*).

Thus *Hridaya* denotes an organ which controls the passage of *Prana* by collecting, distributing in a rhythm. This definition indicates that *Hridaya* is the heart and *Hridaya* is the brain too. Therefore *Hridaya* can be as heart for taking and giving impure and pure blood (*Urastha hridaya*) and as brain by its functioning of knowledge, memory, intellect etc. (*Shirastha hridaya*).

The shape of *Hridaya* is like lotus whose apex or mouth is directed downwards. The both organs i.e., Heart with aorta and brain with spinal cord have resemblance with lotus with long slender stem as mentioned by *Acharya Sushruta*. Both of them i.e., heart and brain has downward direction; spinal cord and descending aorta appears like the stem or stalk of lotus.

According to Ayurvedic classic, *Hridaya* is the place of origin of two equally vital *Srotasas* i.e. *Pranavaha srotas.* The *Aahar Rasa is* converted to *Rasa Dhatu* which provides nourishment to all other body constituents. This work is performed by *Rasavaha srotas.* An uninterrupted supply of the *Amberapeeyush* (oxygen) through breathing is obtained by *Rasa Pranvaha srotas. Rasa dhatu* is the first tissue produced out of the nutritive fluid *Aahar Rasa. Rasa* and *Rakta* circulates together all over the body by *Hridaya* with the help of *Vyanavayu* and *Rakta* is accountable for *Jeevan Karma*, sustaining the life processes by providing *Pran* to the entire body constituents. *Rasa-rakta* complex is necessary for the nourishment and persistence of life. The *Rasa* i.e. fluids and nutrients, *Rakta* and *Oja* i.e. vital fluids are pumped by *Hridaya* to all the tissues and organs of the body. Therefore the proper functioning of the heart is responsible for life, vigor, consciousness, performance of sense organs, mind and intellect and indirectly happiness and sorrow depend on it. The human heart provides tissues with vital nutrients, and facilitates waste excretion. As a result, cardiac dysfunction leads to overwhelming physiologic consequences. Disruption of any element of the heart i.e. myocardium, valves, conduction system, and coronary vasculature, can adversely influence pumping efficiency consequently results in morbidity and mortality. [45]

Optimum and efficient circulation of blood throughout the body ensures proper nutrition, excretion, gaseous exchange, thermoregulation and haemostasis, digestion and metabolism, immunity and life in the body. *Acharya Sushruta* mentions that *Hridaya* is place for *Chetna tatva (*consciousness*)*. Thus heart is responsible flow of life to all over body. This fairly explains the importance of this in our body and its vulnerability to any kind of disturbances in the body and reason of cardiovascular disease being leading cause of death.

Pranvaha srotasa is accountable for uninterrupted supply of the *Amberapeeyusha*, through breathing. During inhalation, *Pranavayu* causes dilation of chambers, various valves opening. It is able to expand because of its indivisible allegiance with *Rakta* and its *Ushna* attribute. The lungs up to alveoli expand by *Prana vayu* and the inhalation is done. Likewise blood is accepted in right atria (*Alinda*) of heart and is pushed in the right verticals (*Nilaya*) and from there it discharges in the great vessel like pulmonary artery. This blood interacts freely with the treated air (*vishupadaamrita*) and the result is *Phenapradurbhav* in the lungs. Thus, the blood after interaction and exchange returns to the heart for circulation. Thus right verticle half of heart is the *Pranvaha srotas*. Moreover, *Prana Vayu* is responsible for creating the cardiac impulse (*Praspanda*) which travels mostly on the right side of the heart with only a branch to the left. The clinical picture of right sided failure resembles that of the *Pranavaha srotasa*. [37]

The first nutrient fluid (*Rasa*) resulting from various digestive processes in the alimentary canal oozes out in the vessels (*Rasayanees*) and from there it is carried to heart for circulation. The blood after interaction and the gaseous exchange in the lungs returns to the heart. This combination is sent out of the heart by the action of *Vyana vayu* from the aorta of the left ventricle to nourish the whole body. There for left verticle half of heart is the *Rasavaha Srotomoola*. Furthermore, the left sided failure resembles affliction of the *Rasavaha srotasa*. [37]

The heart, the four chambered pumping organ of the circulatory system is enclosed within the pericardium along with the great vessels and is located in middle mediastinum, the heart supplies nutrition and provides life by circulation of *Rasa* (body fluids) and *Rakta* (blood) complex. Myocardium is derived from *Mansa dhatu* (muscular tissue) and pericardium *Meda dhatu* is derived from (fatty and connective tissue) respectively. One or all the three *Doshas* can affect each of these layers. For normal functioning of heart depends upon equilibrium of these *Doshas* present in the heart. The vitiation of any of the *Doshas* results in causation of cardiac diseases.

Hridaya- Chetana Sthana

According to Aacharya *Charak Prana* and *Oja (Para Oja)* rest in *Hridaya* (heart), *Acharya Sushrut* has mentioned that heart is the place for *Chetna tatva*. *(Hridayam Chetana Sthanam)* which means the seat of consciousness is in the heart. Life flows to all over body by Heart and *Sharir dharan* (sustaining the body) depend on it.

Furthermore it is the seat for mind or *Mana*. [46] According to *Chakrapani Chaithanyasangraha* (Charak Su. 30/7) means that consciousness is concentrated in heart by controlling the mind. Heart is the place of origin of cardiac impulse, on account of which it harbors the *Aatmikgunas* like *Dhnyan*, *Vidnyas, Icchaa, Dvesha, Sukha, Dukkha, Prayatna*. *Balhik Bhishaka Kankayana* explained that as the *Hridaya* (heart) being receptacle of *Chetana tatva* so it is differentiated first in fetal development. *Dhanvantari* considered that all organs like *Hridaya* (heart) are formed simultaneously with *Bhavas* like *Oja, Mana, Aatma* and *Buddhi.* The *Hridaya* (heart) is indispensible for all the normal mental and physical activities because the entire sense perception (representing the action of *Vayu*) depends on the heart.

According to *Aacharya Charak* thought, decision, discussion, grasping, determination and anything perceived by the mind; like happiness, sorrow, desire, aversion and other thinkable things are the objects of *mana* or mind. On the basis of ancient and modern science it can be stated that these are the subjects of brain. After the brain death, the heart can be transplanted, hence it can be stated that the *Mana* is located in the brain, only the various desires or virtues (*Bhavas*) revealed by *Mana* are expressed by *Hridaya*. One of the etiological factors of vitiation of *Rasavaha srotasa* is over-anxiety (*Charak samhita vimansthan* chapter 5).

According to Neurocardiology, heart is a sensory organ and a sophisticated centre for receiving and processing information which has highly complex system with its own functional brain. Various experiments have showed that the signals continuously sent by heart to the brain influence the function of higher brain centers involved in perception, cognition, and emotional processing. More information moves from heart to brain in three ways i.e. neurologically (through transmission of nerve impulses), biochemically (through hormones and neurotransmitters) and biophysically (through pressure waves). Besides, rising scientific facts indicate that the heart may communicate with the brain and body in a fourth way i.e. energetically (through electromagnetic field interactions). Thus heart has a dynamic relationship with brain. So it performs and regulates the functions of both circulatory as well as nervous system.

CONCLUSION

Ayurveda described both brain and heart i.e. under one dome i.e., *Hridaya.* The *Urastha* hridaya considered in Ayurveda as described in *Samhitas* was hollow organ (*Kostha*), having a shape of lotus and formed by two peshis, and three *Mandala sandhis*, and linked with ten *Maha dhamanies* i.e. pulsating vessels which provide blood, oxygen, nutrition, and consequently immunity to the whole body. Considering this fact *Urastha hridaya* is having resemblance with heart considered in modern anatomy anatomically, physiologically and functionally.

REFERENCES

1. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I.. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sarira Sthana. Ch. 6 Ver.7
2. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Charaka Samhita. Vol I.Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch 30 Ver. 8-12
3. Vagbhata, Ashtanga Hridaya edited with 'Vidyotani' Hindi commentary by Kaviraja Atrideva Gupta, Chaukhambha Prakashan, Varanasi, reprint 2012, page-252.
4. Susruta. Shastri Kaviraja Ambikadutta, Editor.Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sarira Sthana. Ch. 4 Ver. 30
5. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Charaka Samhita, Vol II. Chowkhamba Krishnadas Academy, Varanasi. Sharira Sthan Ch. 6
6. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sharira Sthana. Ch.6 Ver. 9
7. P.V.Tiwary - Kashyapa Samhita /Vriddha Jeevaka Tantra – text with English translation and commentary- Chaukhamba Vishwa Bharati, Varanasi, 2002; 127.
8. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sharira Sthana. Ch 5 Ver.5
9. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Chikitsa Sthana. Ch. 2 Ver. 12

10. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Caraka Samhita., Vol II. Chowkhamba Krishnadas Academy, Varanasi. Sharira Sthan Ch 7 Ver10
11. Murthy K.R. Srikantha, editor; Sushruta Samhita, Vol-1, Varanasi, Chaukhambha Orientalia, reprint edition 2012, page-112.
12. Murthy K.R. Srikantha, editor; Sushruta Samhita, Vol-1, Varanasi, Chaukhambha Orientalia, reprint edition 2012, page-60.
13. Sushruta: Sushruta Samhita with Nibandha Sangraha commentary of Acharya Dalhana, Edited by Vaidya Yadavji Trikamji Acharya and Narayana Ram Acharya 'Kavyatirtha'; Published by Chaukhamba Sanskrit Sansthan, Varanasi; Edition-reprint- 2009; Shareera sthana. 4/31p-116
14. Susruta. Shastri Kaviraja Ambikadutta, Editor. Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sharira Sthana. Ch. 5 Ver 11-13
15. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sharira Sthana. Ch. 3 Ver. 15
16. Vagbata, Astanga hridaya, Sarvanga sundari commentary of Arunadatta and Ayurveda rasayana commentary of Hemadri, Chowkamba orientalis varanasi, sutrasthana, Chapter 12,Shloka, 6,7: 193.
17. Vagbata, Astanga hridaya, Sarvanga sundari commentary of Arunadatta and Ayurveda rasayana commentary of Hemadri, Chowkamba orientalis Varanasi, sutrasthana, Chapter 12, Shloka, 13: 194.
18. Vagbata, Astanga hridaya, Sarvanga sundari commentary of Arunadatta and Ayurveda rasayana commentary of Hemadri, Chowkamba orientalis, sutrasthana, Chapter 12, Shloka, 15: 194.
19. Vagbata, Astanga hridaya,Sarvanga sundari commentary of Arunadatta and Ayurveda rasayana commentary of Hemadri, Chowkamba orientalis, sutrasthana, Chapter 11, Shloka, 37: 189.
20. Susruta. Shastri Kaviraja Ambikadutta, Editor. Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Chakrapani On Ch. 15 Ver. 99
21. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Charaka Samhita. Vol III. Chowkhamba Krishnadas Academy, Varanasi. Chikitsa Sthan Cha Chi 28
22. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors.Charaka Samhita. Vol III. Chowkhamba Krishnadas Academy, Varanasi. Chikitsa Sthan Ch 15 Ver. 33
23. Murthy K.R. Srikantha, editor; Sushruta Samhita, Vol-1, Varanasi, Chaukhambha Orientalia, reprint edition 2012, page-155.
24. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors.Charaka Samhita. Vol I. Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch. 12 Ver 26
25. Vagbhata. Tripathi Brahmananda, editor. Reprint 2015. Astanga Hridaya. Chaukhamba Sanskrit prathishthan, Delhi. Sutra Sthana. Sutra Sthana.Ch. 12 Ver 16
26. Vagbhata. Tripathi Brahmananda, editor. Reprint 2015. Astanga Hridaya. Chaukhamba Sanskrit prathishthan, Delhi. Sutra Sthana. Ch. 12 Ver.15-16
27. Vaidya YadhavjiTrikamji Acharya, editor. CharakaSamhitha (Vimansthana), Chapter 5, Citation no. 8, Revised by Charaka and Dridhabala with Sri Chakrapanidatta Ayurvedadipika, Reprint 2013, Choukambha Prakashan, Publications, Page no. 250
28. Kaviraj Ambikadutta Shastri, Sushruta Samhita, Ayurved Tattvasandipika, (Sharirsthana), Chapter 9, Citation no. 12 Reprint 2012, Chaukhambha Sanskrit Sansthan Publications, Page no. 96
29. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sharira Sthana. Ch. 14 Ver 3
30. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Ch 14 Ver. 3
31. Susruta. Shastri Kaviraja Ambikadutta, Editor. Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Ch. 15 Ver. 5
32. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Charaka Samhita. Vol I. Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch 25 Ver.5
33. Susruta. Shastri Kaviraja Ambikadutta, Editor. Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Ch. 15 Ver. 5
34. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors Charaka

Samhita. Vol I. Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch. 25 Ver.5

35. Maharshi Bhela, Bhela samhitha, Hindi commentary by Sri Abhay Katyayan, Chowkambha Surbharati Prakashan varanasi, sutrasthana, chapter 20, shloka, 3: 101
36. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Charaka Samhita. Vol I. Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch. 30 Ver. 8-12
37. Vaidya Vilas Nanal Some Cardiotonic Herbs, Nanal Softwares, 606, Sadashiv Peth, Kunte Chowk, Pune 64-65
38. Susruta. Shastri Kaviraja Ambikadutta, Editor. Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Ch. 15 Ver. 19
39. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sarira Sthana. Ch. 3 Ver. 15
40. Susruta. Shastri Kaviraja Ambikadutta, Editor Susruta Samhita. Vol I. Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Sutra Sthana. Chakrapani On Ch. 15 Ver.99
41. Bhaskar Govind Ghanekar, Sushrut Samhita (Sharirsthana), Chapter 6, Citation no. 33 Reprint, Nov.2008, Meharchand Lachhmandas Publications, Page no. 126
42. Bhaskar Govind Ghanekar, Sushrut Samhita (Sharirsthana), Chapter 6, Citationno. 34 Reprint, Nov. 2008, Meharchand Lachhmandas Publications, Page no. 126
43. Agnivesha. Dwivedi Lakshmidhar, Dwivedi BK, Goswami Pradip Kumar, Editors. Caraka Samhita. Vol I. Chowkhamba Krishnadas Academy, Varanasi. Sutra Sthan Ch. 30 Ver. 7
44. Amruta Elamon & K.N Anandalakshmy / Int.J.Res Ayurveda Pharm 9 (3) 2018 p 169.
45. Kumar Vinay, Abbas Abul K, Aster Jon C. Robbins and Cotran Pathologic Basis of Disease. South Asian Edition. Volume II. Published By Reed Elsevier India Private Limited, 9th Edition,Chap 12, Page No. 523
46. Maharushi Sushrut, Sushurut Samhita, edited by Kaviraj Ambikadatta Shastri, Ayurved tatvasandipika, edition- 2012, Chaukhamba Sankrit Pratishthan, Varanasi. Volume 1, Shair-sthana chapter 4/34, page44.

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