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# Anatomical consideration of *Hridaya Marma* - A Review

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## ABSTRACT

*Hridaya Marma* is 4 Anguli in size, situated between two breasts near to cardiac orifice of stomach. It is looking like inverted lotus and consist *Satwa*, *Raja* and *Tama* as physiological entities. It is hollow muscular pumping organ made up of *Mamsapeshi* (*hritapeshi*) and looking like *Adhomukha Kamala*. According to Acharya Bhavaprakash, *Hridaya* is also known as *Jivashaya*. It means it is seat of life. *Ashaya* means *Avastana Pradesh*; it means *Hridaya* having cavities in it known as atrium and ventricles. According to Acharya Vagbhata, *Hridaya* having *Samrutasamrutadwaram* it means valves of the heart. According to Acharya Charaka, it has ten *Moola Siras*. *Hridaya* is seat for *Vyana Vaayu*, *Sadakupitta*, *Avalambaka Kapha*, *Para Ojus*, *Chetana* and *Manas*. According to Acharya Charaka and Acharya Sushruta, *Hridaya* is one of the *Kostanga*. According to Charaka, *Hridaya* is the *Moola Sthana* for *Pranavaha Srotus* and *Rasavahasrotas*. It is the seat of *Chetana*, hence it maintains life process. It ejects and receives *Rasarakta Dhatu* by the help of *Vyanavayu*. It controls intellectual power and mental activities of human being, by *Manas* and *Sadakupitta*.

**Key words:** *Hridaya*, *Marma*, *Pranavaha Srotus*, *Heart*.

## INTRODUCTION

*Hridaya* means Heart. All the life processes depend on the nutrition (*Preenana*) and oxygen (*Jeevana*) which they receive through circulation of blood. The blood is pumped and circulated to every corner of the body through the heart, throughout the span of our life. According to Ayurveda it is a site of *Manas* (mind) and thus is related with our thought process and emotions. *Hridaya Marma* is predominantly made up of *Sira*'s or blood vessels.

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We know that the arteries carrying nutrition and oxygenated blood is pumped to all parts of the body. Likewise, the heart receives the de-oxygenated blood from the peripheral parts of the body through veins and pumps it to the lungs for oxygenation. *Hridaya* is considered as a root of *Rasavaha Srotas* (channels carrying nutrition) and *Pranavaha Srotas* (channels carrying life element in the form of air, oxygen).

*Hri* comes from *Harati* which means 'to receive', *Da* is the short form of *Dadati* which means 'to give' and *Ya* stands for *Yapayati* which means 'to go', 'to move' or 'to circulate'. It is interesting to note that the heart performs exactly these three functions of giving blood, receiving blood and circulating blood by acting as a pump.

### Anatomy of *Hridaya*

**Location:** *Hridaya* is a *Madhya Shareeragata Marma*. Acharya Sushruta quotes that a *Hridaya Marma* is situated between two breasts and is at the *Amashaya Dwara*, which is seat of *Satwa*, *Raja* and *Tama*.<sup>[1]</sup> *Hridaya* is located in between the *Stanas* (breasts) in

the chest cavity. It is located above the *Amashaya Dwara* (Cardiac orifice).

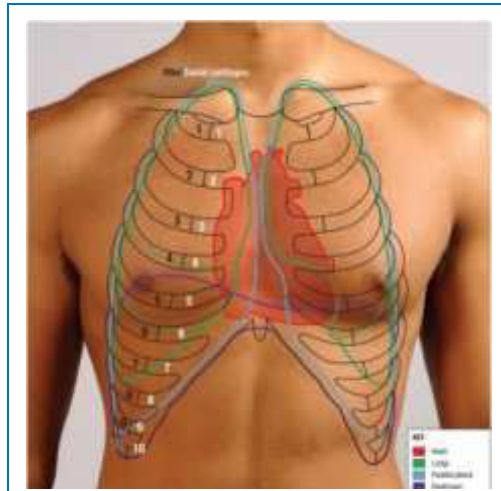


Fig. 1: Location of Hridaya

**Shape:** According to Acharya Susruta, *Hridaya* is in the shape of inverted lotus.<sup>[2]</sup> According to Acharya Bhela, *Hridaya* is like *Kumbhika Phala*. It's looking like inverted lotus its means apex of the heart is tip of the lotus, myocardium is body of lotus and aorta is petiole of lotus.

**Size:** Acharya Charaka explains the size of *Hridaya* as 4 *Angula*.<sup>[3]</sup> Vagbhata also opines the same in *Ashtanga Samgraha*. *Hridaya Marma* occupies a space of 4 *Angula* dimension (approximately equal to the horizontal dimension or breadth of middle segment of one's own middle finger)

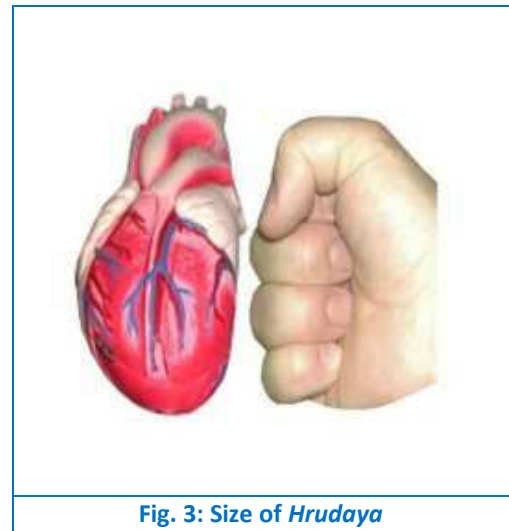


Fig. 3: Size of Hridaya

**Features Of Hridaya**

According to Acharya Arunadatta, *Hridaya* is made up of *Mamsapeshi (Hritapeshi)* and looking like *Adhomukha Kamala*. According to Acharya Bhavaprakash, *Hridaya* is also known as *Jivashaya*. It means, it is seat of life. *Ashaya* means *Avastana Pradesh*; it means *Hridaya* having cavities in it known as atrium and ventricles. According to Acharya Vagbhata, *Hridaya* having *Samruta Asamruta Dwaram* it means valves of the heart. According to Acharya Charaka, it has ten *Moola Siras*.<sup>[4]</sup>

*Rachananusara*, *Hridaya* is a *Sira Marma*. *Marma* is considered as the vital point where there will be the combination of *Mamsa, Sira, Snayu, Asthi* and *Sandhi*. *Siras* are distributed throughout the body. These form a network which is subdivided into tiny vessels. If any of these *Sira* is injured at a vital site or area, the nutrition to that vital part is restricted, ultimately leading to loss of function, pain and sometimes even death generally called as necrosis. *Anganusara* it is an *Uro Sthita Marma*. *Parinamanusara* it is considered as a *Sadhya Pranahara Marma*.<sup>[5]</sup>

*Hridaya* is seat for *Vyana Vaayu, Sadakapitta, Avalambaka Kapha, Para Ojus, Chetana* and *Manas*.

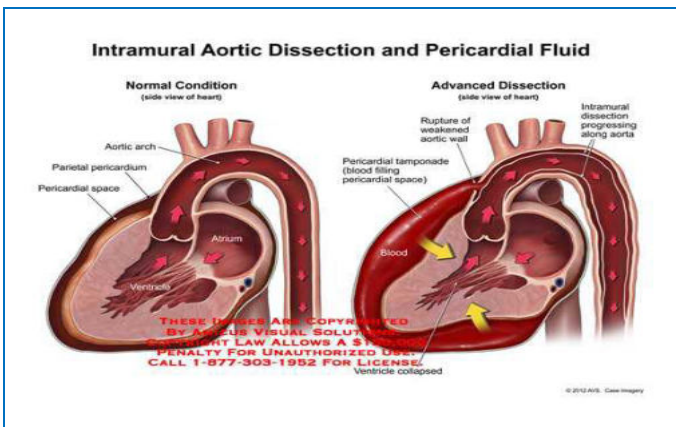


Fig. 2: Shape of the Hridaya

According to Acharya Charaka and Acharya Sushruta, *Hrudaya* is one of the *Kostanga*. According to *Charaka*, *Hrudaya* is the *Moola Sthana* for *Pranavaha Srotus* and *Rasavahasrotas*.

### Functional anatomy of Hrudaya

1. It is the seat of *Chetana*, hence it maintains life process (conscious level).<sup>[6]</sup>
2. It ejects and receives *Rasarakta Dhatu* by the help of *Vyanavayu* (circulation).<sup>[7]</sup>
3. It controls intellectual power and mental activities of human being by *Manas* and *Sadhakapitta* (Little brain in heart).<sup>[8]</sup>

### DISCUSSION

*Hri* comes from *Harati* which means 'to receive', *Da* is the short form of *Dadati* which means 'to give' and *Ya* stands for *Yapayati* which means 'to go', 'to move' or 'to circulate'. It is interesting to note that the heart performs exactly these three functions of giving blood, receiving blood and circulating blood by acting as a pump. In Ayurveda, *Hrudaya* word is also used for brain, because brain also receives sensory information from the peripheral part of the body through the sensory nerves, sends motor commands to peripheral part of the body through motor nerves and this process is continuously maintained. This will create confusion to the anatomy student, to avoid this confusion Ayurvedic anatomist have given saperate names for heart and brain; heart as *Urogata Hrudaya* and brain as *Shirogata Hrudaya*. As per *Trimarma* concept, *Hrudaya* is heart and *Shiromarma* is brain.

*Hrudaya* is *Urogata Marma* situated in between breast. According to modern anatomy heart is situated in middle mediastinum. Mediastinum is the space between two medial surfaces of the lungs. This point will support for *Hrudaya* means heart.

According to Acharya Sushruta, *Hridaya* is in the shape of inverted lotus. Its means apex of the heart is tip of the lotus, myocardium is body of lotus and aorta is petiole of lotus. This explanation gives the knowledge regarding structural aspect of heart.

Acharya Charaka explains the size of *Hridaya* as 4 *Angula*. According to modern anatomy, size of the heart is about the size of an adult's closed fist. The heart weighs 7 to 15 ounces. It means measurements of *Hrudaya* and heart are almost same.

*Hrudaya* is one of the *Ashaya Yukta Kostanga* and having *Rasa-Rakta* complex in it, situated in between two *Sthana*, near to *Amashayadwara* which is formed by *Hrutapeshi*. According to modern anatomy, heart is hollow muscular organ situated in mediastinum near to the cardiac end of the stomach.

According to Ayurvedic Anatomist, *Hrudaya* is also known as *Jivashaya*, having *Samrutasamrutadwaram* and it consist of ten *Moola Sira's*. According to modern anatomy heart consist atrium and ventricles, valves and 10 great blood vessles. *Ashaya* means *Avastana Pradesh*; it means *Hrudaya* having cavities in it known as atrium and ventricles. According to Acharya Vagbhata, *Hrudaya* having *Samrutasamrutadwaram* it means valves of the heart. According to Acharya Charaka it has ten *Moola Siras*.

Table 1: *Dasha Moola Siras*

SN	<i>Moola Sira</i>	No
1	Superior venacava	1
2	Inferior venacava	1
3	Pulmonary trunk	1
4	Aorta	1
5	Pulmonary vein	4
6	Coronary arteries	2
	Total	10

*Hrudaya* is the seat of *Chetana*; hence it maintains life process (Conscious). The general functions of *Vyana Vata* as one that swiftly circulates (*Mahajava*) throughout the body performing the functions of motion, extension, sudden movements, closing and opening of eyelids. According to Rollin McCraty, Ph.D.,



Raymond Trevor Bradley, Ph.D. and Dana Tomasino, BA heart is seat of conscious along with brain. Many believe that conscious awareness originates in the brain alone. Recent scientific research suggests that consciousness actually emerges from the brain and body acting together. A growing body of evidence suggests that the heart plays a particularly significant role in this process. Far more than a simple pump, as was once believed, the heart is now recognized by scientists as a highly complex system with its own functional “brain.” The Heart Has Its Own “Brain” and Consciousness. We propose that the heart’s field acts as a carrier wave for information that provides a global synchronizing signal for the entire body. Specifically, we suggest that as pulsing waves of energy radiate out from the heart, they interact with organs and other structures. The heart generates the body’s most powerful and most extensive rhythmic electromagnetic field. Compared to the electromagnetic field produced by the brain, the electrical component of the heart’s field is about 60 times greater in amplitude and permeates every cell in the body. The magnetic component is approximately 5000 times stronger than the brain’s magnetic field and can be detected several feet away from the body with sensitive magnetometers.<sup>[9]</sup>

Experiments conducted at the Institute of Heart Math have found remarkable evidence that the heart’s electromagnetic field can transmit information between people. We have been able to measure an exchange of heart energy between individuals up to 5 feet apart. We have also found that one person’s brain waves can actually synchronize to another person’s heart. Furthermore, when an individual is generating a coherent heart rhythm, synchronization between that person’s brain waves and another person’s heartbeat is more likely to occur. These findings have intriguing implications, suggesting that individuals in a psychophysiological coherent state become more aware of the information encoded in the heart fields of those around them. These modern experiments clarify functions heart with special reference to *Chetanastana* and *Mahajava* function of *Vyanavata*.

According to *Astanga Hrudaya* mentions *Vyana Vata* as *Mahajava* because of its great speed and performing all the activities in the body. *Rasa Dhatu* gets ejected out of the heart through the blood vessels called *Siras* which originate at the heart which is carried throughout the body with the help of *Vyana Vata*. Hence the functions of *Vyana Vata* can be summarized under the heading of *Rasa- Raktha Paribhramana* (circulation of nutrients). The heart is made up of around half a billion cells. The majority of the cells make up the ventricular walls. The electrical stimulus from the SA node eventually reaches the AV node and is delayed briefly so that the contracting atria have enough time to pump all the blood into the ventricles. Once the atria are empty of blood the valves between the atria and ventricles close. At this point the atria begin to refill and the electrical stimulus passes through the AV node and Bundle of His into the Bundle branches and Purkinje fibres. Pumping action of the heart is depends upon electrical stimulation produced by conducting system. This modern anatomy explains functional anatomy of *Hrudaya* in the form of *Rasa- Raktha Paribhramana and Mahajava*.

According to *Astanga Hrudaya*; *Hrudaya* controls intellectual power and mental activities of human being by *Manas* and *Sadapitta*. Modern science has verified what the ancients believed about one’s heart - that the heart is a center of higher wisdom. It can actually remember things and it functions much like the brain. The heart’s structure is similar to that of the brain, it has an intricate network of neurons, neurotransmitters, proteins and support cells. “There is a brain in the heart, metaphorically speaking,” said Dr. Rollin McCraty of the Heart Math Institute, a non-profit that offers treatments based on the connection between heart and brain. “The heart contains neurons and ganglia that have the same function as those of the brain, such as memory. It’s an anatomical fact,” he said. “What people don’t know that well is that the heart actually sends more information to the brain (than the brain does to the heart),” he added. Dr. J. Andrew Armour coined the term “heart brain” in 1991; he has also called the heart a “little brain.”

Scientists at the HeartMath Institute have extended this body of scientific research by looking at how *larger-scale patterns* of heart activity affect the brain's functioning. HeartMath research has demonstrated that different patterns of heart activity (which accompany different emotional states) have distinct effects on cognitive and emotional function. During stress and negative emotions, when the heart rhythm pattern is erratic and disordered, the corresponding pattern of neural signals travelling from the heart to the brain *inhibits* higher cognitive functions. This limits our ability to think clearly, remember, learn, reason, and make effective decisions. (This helps explain why we may often act impulsively and unwisely when we're under stress.) The heart's input to the brain during stressful or negative emotions also has a profound effect on the brain's emotional processes - actually serving to reinforce the emotional experience of stress. In contrast, the more ordered and stable pattern of the heart's input to the brain during positive emotional states has the opposite effect - it facilitates cognitive function and reinforces positive feelings and emotional stability. This means that learning to generate increased heart rhythm coherence, by sustaining positive emotions, not only benefits the entire body, but also profoundly affects how we perceive, think, feel, and perform. In *Hrudaya Marmabhighata*, *Acharya Charaka* explained most of the mental disease like *Unmada*, *Apasmara*, *Moorcha* etc.<sup>[10]</sup>

## CONCLUSION

Anatomically *Hrudaya* is one of the *Ashaya Yukta Kostanga* and having *Rasa-Rakta* complex in it, situated in between two *Sthana*, near to *Amashayadwara* which is formed by *Hrutapeshi*. According to modern anatomy, heart is hollow muscular organ situated in mediastinum near to the cardiac end of the stomach. Physiologically, *Hrudaya* is seat of *Chetana*. *Hrudaya Hri* comes from *Harati* which means 'to receive', *Da* is the short form of *Dadati* which means 'to give' and *Ya* stands for *Yapayati* which means 'to go', 'to move' or 'to circulate'. It is interesting to note that the heart

performs exactly these three functions of giving blood, receiving blood and circulating blood by acting as a pump. Pathologically, *Dosaja Hrudaya Marmabhighata* leads to manifestation of mental disorders like *Unmada*, *Apasmara*, *Chittanasha* and *Moorcha*. Anatomical, physiological and pathological explanation of heart and *Hrudaya* are found to be same in modern and Ayurvedic anatomy.

## REFERENCES

1. Susruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya, edited by Jadavaji Trikamji Acarya; seventh edition, Chaukhamba Orientalia Varanasi, 2002. Pp-824. Page no -373 Shareera Sthana 6|25
2. Susruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya, edited by Jadavaji Trikamji Acarya; seventh edition, Chaukhamba Orientalia Varanasi, 2002. Pp-824. Page no-358 Shareera Sthana 4|32
3. Susruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya, edited by Jadavaji Trikamji Acarya; seventh edition, Chaukhamba Orientalia Varanasi, 2002. Pp-824. Page no-373 Shareera Sthana 6|25
4. Agnivesha. Charaka Samhita with Ayurveda Deepika Commentary of Chakrapanidatta. Edited by Vaidya Jadavji Trikamji Acharya; 5<sup>th</sup> edition; Chaukhambha Sanskrit Sansthana; Varanasi; 2001; Pp: 738; Page No: 183 (Sutra Stana 30/3).
5. Susruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya, edited by Jadavaji Trikamji Acarya; seventh edition, Chaukhamba Orientalia Varanasi, 2002. Pp-824. Page no-373 Shareera Sthana 6|25
6. Agnivesha. Charaka Samhita with Ayurveda Deepika Commentary of Chakrapanidatta. Edited by Vaidya Jadavji Trikamji Acharya; 5<sup>th</sup> edition; Chaukhambha Sanskrit Sansthana; Varanasi; 2001; Pp: 738; Page No: 184 (Sutra Stana 30/7).
7. Susruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya, edited by Jadavaji Trikamji Acarya; seventh edition, Chaukhamba Orientalia Varanasi, 2002. Pp-824 page no 260 Nidana Sthana 1|17-18
8. Vagbhata. Astanga Hrudayam with Sarvanga Sundara Commentary of Arunadatta and Ayurveda rasayana of Hemadri. Edited by Bhisagacharya Hari Shastri Paradakara Vaidya; 8<sup>th</sup> edition; Chaukhambha

Orientalia; Varanasi; 1998; Pp: 956; Page No: 413  
(Sha.4 / 37).

9. [www.heartmath.org](http://www.heartmath.org)

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