A REVIEW ON THE CONCEPT OF HRIDAYA AS BRAIN OR HEART

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ABSTRACT
In Ayurveda, multiple meanings attributed to a single term have been found for examples like Nidana means cause of disease, Panchanidana (five diagnostic method) and Rasa means the six Rasas of the food, the metal mercury, similarly Hridaya means both the heart and the brain. Hridaya included in Trimarman, described as a Chetana. It is a site of Paraajus, Moola of Rasa and Pranavaha Srotas and the hold of Trigunas. Among Dasha Pranayatana Hridaya is mentioned. After collecting information from various ancient texts and detailed dissection on cadaver, the structures present at the site of Hridaya can be understood as heart and its related structures. It comes under the variety of Sadya Pranahara Mana and Trimarmeeya Adhyaya, Charaka Samhita and Hridaya in Garbh - Vyakaran, the brain. Recent research reveals that there are two brains, one in cranial cavity and other in Heart itself. Study of Hridaya which is described under “Arthe Dash Mahumalrijk Adhyaya”, and Trimarniya Adhyaya of Charaka Samhita and Hridaya in Garbh-vyakaran Shariropkramnii Adhyaya (Chapters on embryology) of Sushruta Sharir Sthan (Anatomy by Sushruta) and whether it has same meaning indicating similarity with brain and heart or different meaning and its broader aspect with respect to brain in line with modern research.

Keywords: Brain, Chetanamarma, Heart, Hriday

INTRODUCTION
The anatomical term “Hridaya” itself has been controversial since ages and continues to be so even today. The term Hridaya is formed by applying Kayana to Hri Dhatu. Hridaya is formed from 3 letters Hri Dhatu is used for taking something. “Dh” means to give and “Ya” means that which always keeps functioning. So it is meant that Hridaya is an organ that takes and gives something. By deep observation and study of Samhita, it can be said that at least two organs equally claim to put themselves synonymous with the term “Hridaya”. At the end of the scale it is the belief that Hridaya is “Brain”. At the other extreme end it is said to be Hridaya as “Heart”. The fact that there are firm evidences to support both these views makes the matter still more controversial. In large scale, taking to a compromise, two Hridaya have been accepted, namely Urohridaya and Shiroyridaya. The anatomical interpretation to be bases strictly on the contact refers to the seat of Buddha, Mana, Chetana and Indriyas Urohridaya is to be accepted whenever the references are related to seat of circulation of Rasa, Rakta etc. Yogvashishtha mentions that there are two Hridaya one is thoracic and other is in head region

Hridaya: The Divine Centre of Chetna

According to Acharya Sushruta, Hridayas considered as the centre of Chetna. In Ayurveda, Shira is considered as the centre for all ‘Indriyas’ whereas the centre for Atma and Mana is Hridaya. As due to the centre for all Indriyas ‘Manas’ can also be considered as a unique and ideal ‘Indriya’ and as making this fact as the basis, ‘Shira’ can also be considered as its place. Manas have two characteristic Gunas: 1.Ekatva 2.Anutva. These two Gunas of Mana can take it any where whether it is heart or brain. The entire messages which Manovaha Srotas conveys to Mana, keeping in touch with all the Indriyas and Shairir, Mana delivers it to the Atma which is situated in the heart.

Some References Regarding Hridaya as Heart

Acharya Charaka has included Hridaya in Dasha Pranayatana. Hridaya is originated from the essence of Shonita and Kaptha. Below and to the left side of Hridaya, Pleeha and Phupphasu are present to the right side Yakrit and Kloma are present. Hridaya is located between the breasts in thorax and the same type of references is quoted by Sharrangardhar. The Moola of Pranavaha and Rasavaha Srotas are Hridaya. Acharya Charaka has included Hridaya one among 15 Koshtang as which means that it is the organ that is close to the Kosha (alimentary canal). In Trimarmeeya Adhyaya, Charaka has described three Marmas viz. Hridaya Shira and Vasti. Here Shira is already mentioned so by Hridaya it is considered as heart. Acharya Vagbhatt has considered Hridaya as Moola of Siras. Charaka has considered it as centre of Ojah. AcharyaCharaka has considered it as Dashamamahamoolaa. This verse indicates Hridaya is a muscular heart which is found in thoracic region.

Some References Regarding Hridaya as Brain:

The viitated Doshas moving upwards, gets lodged in the Indriyaayatan Hridaya and produces Kama, Bhaya, Lobha, Moha, Harsha, Shoka, Chinta. In modern aspect these all senses are produced by brain. Anjana, Nasya, and Aypeedana Karmas are used for the removal of Krimi from Hridaya. According to Vagbhhatta, the centre for Sadhaka Pitta is heart but the entire functions of Sadhaka Pitta Buddha, Medha, and Abhimana etc., operates through brain. Hence, heart is considered as heart firstly, as we all know that...
Yvan Vayu is known as the king for all its vital functions like Gati, Upshepana, Ukhshepana, Unmeshana. Considering the fact that all these functions of Yvan Vayu are much related with the nervous system, there are many chances to consider heart as brain.

Hridaya has resemblance with lotus in Adhomukha position. According to shape some scholar consider it with heart but its function of sleep is the subject of brain not heart, when Tamoguna overtakes and envelops it, the individual goes to sleep, moreover brain with spinal cord seems like Adhomukh Pandarka that is why Hridaya can be taken as brain. Hridaya described as the seat of knowledge, mind, thoughts, Oja, intellect, memory, life, five sense organ and their objects clearly indicates the function of brain and not that of heart.

DISCUSSION
Both organs have downwards direction, resembling Adhomukha Pundrika, spinal cord and descending aorta resembles the stem or stalk of lotus. Hridaya performs and regulate the functions of nervous system and circulatory system. In cerebro-vascular accident both organs are affected. The DNA in brain cell and heart cell is completely identical. Both types of cell have common origin from stem cells, and therefore contain the same genetic material. The only difference between brain and heart cells is how they use that DNA code. Moreover the brain and heart have excitable cells. The excitable cells are those that can best emulate to create a tiny electric current. Muscle fibers and nerve cells (neurons) are excitable. Recent study reveals that Heart and brain interact in a dynamic relationship that regulates many aspects of cognition and emotional experience. The propagation of information is more from the heart to the brain than the other way around, and this information influences region’s in the brain that affect decision making, creativity and especially emotions.

CONCLUSION
The term Hridaya is formed by applying Kayana to Hri Dhatu. Hridaya is formed from 3 letters Hri Dhatu is used for taking something, ‘Da’ means to give and ‘Ya’ means that which always functioning. Hridaya can be a heart for taking and giving impure and pure blood and uninterrupted functioning by its own conducting system where as brain by its sensation and motor action and functioning of knowledge and intelligence.

From above references Hridaya, can functionally be considered as a brain as the seat of knowledge, mind, thoughts, Oja, intellect, memory, life, five sense organ and their objects and anatomically as heart as per its location reference described in the context of Marma. Ayurveda physician should consider both as Hridaya to diagnose and treat any diseases.

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