



A COMPARATIVE STUDY OF TRIMARMA WITH SPECIAL REFERENCE TO HRIDAYA MARMA-A REVIEW ARTICLE

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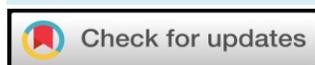
<https://doi.org/10.46607/iamj0609062021>

(Published Online: June 2021)

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Article Received:03/05/2021 - Peer Reviewed:30/05/2021 - Accepted for Publication:04/06/2021



ABSTRACT

Ayurveda is a divine, holistic ancient Indian medical science which treats physical and mental disorder. Ayurveda has lot of secrets to unveil; *Marma* is a unique secret of one of them. Ayurveda describes one hundred seven *marma* as vital spots which are characteristic of life contributing to or essential for life. *Acharya Charak* described *Tri-marma* as *Sira*, *Hridaya* and *Basti* which can be correlated as Central nervous system, cardiovascular system and urinary system. Ayurveda also described medical emergencies at the time of war, in this prospectus *Marma* are mentioned as a spot which should be protected by opponent. The *Prana* means vital breath lives in *Sira*, *Hridaya* and *Basti* so every person should protect this vital spot. In this article an effort is made to correlate *tri-marma* specially *Hridaya marma* and understand the concept of *tri-marma* on the basis of ayurved literature and modern concept and try to verify its importance on *Marma chikitsa*.

Keywords: *Tri-marma*, *Hridaya marma*, cardiovascular system, vital spot, *Marma chikitsa*.

INTRODUCTION

Acharya Charak described Marma as a vital spot of life, which may cause severe pain on injury. In *Sharir Sthan Acharya Charak* mentioned 107 marma in body¹. In *Chikitsa sthan Acharya charak* mentioned *Sira, Hridaya and Basti* as *tri-marma* because these three are more essential for life other than 107 marma and called these three as *Tri-marma*². *Vaat, pitta* and *kapha dosaha* arise pain and they cause death when these *dosahas* will affect this vital and essential spot of body, these places are special reside of *Prana*. *Prana* means vital breath resides specially in *hridaya* so due to injury they may cause death. In *Siddhi sthan Acharya charak* mentioned treatment method, medicine, complication of *tri-marma*³. Acharya Sushruta mentioned 107 marma in which *Basti* and *hridaya* are considered as *Sadhya-pranhar marma*, *marma* of *Sira* like *shringata, adhipati, sankha* are also *Sadhya-pranhar marma*⁴; means they will cause spontaneous death on injury. It proves that *Sira, Hridaya* and *Basti* are more essential for life so *acharya charak* mentioned it separately and elaborate its treatment, complication in different place.

Among these three *marma, hridaya* is most vulnerable because 10 arteries and veins, *Prana* and *Apan vayu, Mann, Buddhi, Chetana* and *Mahabhut* resides here. *Hridaya* is not only the heart but also it indicates cardiovascular system. In *Rigveda marma* are described as a place of body where soldiers have to attack to kill the opponent⁵. In *Atahrvaveda marma* are described as a vital site of body which should be protected by any kind of injury otherwise it may cause severe pain, disability of death⁶. It proves that concept of *marma* was much known and it was used as a tool for war fare. These vital spots may be considered as artery, vein, nerve, bone, ligament, tendon, aponeurosis, joint, cord or membrane.

Trisikhop-bramnounpnishad considered eighteen *marma* which are the place only for *chetana*. This *upnishad* described *marma* as a manure to obtain the god through conquering the subconscious mind⁷. *Kshurikop- upnishad* also described *marma* as a unique tool for yoga by which a person can understand body⁸. *Purans* also described about *marma* in their

aspect such as vital spot, site of energy, subtle space where *prana* resides. *Marma* is mentioned in various literatures according to their script.

AIM AND OBJECTIVES

1. To elaborate the concepts of *tri-marma* and *hridaya marma* in Ayurveda literature.
2. To compare *tri-marma* and try to explain interrelationship between Ayurveda and modern concepts.

METHODOLOGY

To fulfill the aim and objectives collected material from various ancient literature, Samhitas, commentaries, Ayurvedic classical texts, journals and research papers. Tried to understand different concepts, thought and scientific aspect about *tri-marma* and tried to verify through anatomical and pathophysiological theories.

TYPES OF MARMA

Acharya susruta mentioned 107 *marma* in body and categorized these 107 *marma* according to their origin, effect of injury and place. The description of acharya susruta is more scientific than other⁹. Acharya vagabhat mentioned 107 *marma* having a different type *dhamani marma* but total number of *marma* is still same¹⁰. Acharya charak only mentioned 107 *marma* in *sharirsthan* but not described it. In *Chikitsasthan Acharya charak* described about *tri-marma* and its importance, in *siddhi sthan Acharya charak* described treatment method, procedure and preparation of medicine which should be used for the complication or injury on these *marma*.

TRI-MARMA

Sira, Hridaya and *Basti* are considered as *Tri-marma* or *Mahamarma* by Acharya charak¹¹. *Tri-marma* is vital sites of body which control important function of body by influencing the organ, *dosha* and *Srotas*. These *marma* may cause severe pain, permanent or temporary disability or death which depends upon nature of injury. Internal trauma may aggravate the *Vatadidosha*, cause hazardous effect on organ and *srotas*. External injury due to any blow, weapon, and trauma may damage the *Marmasthan* and severe injury will cause death.

SIRA -MARMA

Sira is considered as prime vital organ, it is supreme and important part of our body because it controls all system of body through central nervous system. *Sira* is considered *Uttamanga* because *Prana* means life resides here¹². In ang-uttapati karma acharya shonak mentioned that *sira* was first formed because *sira* is the residency of ear, nose, eyes and tongue like *gyanendriya*(sensory organ)¹³. According to acharya charak injury to *sira marma* may cause rigidity of the side of the neck, facial paralysis, cough, dyspnoea, trismus, dumbness, improper speech, drooping of eye lids, twitching of cheeks, yawning fits, ptyalism, aphasia and facial asymmetry. *Sira* contains *srotas* of *gyanendriy*, *karamendriya* and *praanvaha srotas*. These *srotas* are interconnected with *sira* like rays are connected with sun¹⁴. *Sira* contains *vidhur*, *phan*, *apanga*, *avarta*, *utkshepha*, *shamkha*, *stapani*, *simanta*, *shrungataka* and *adhipatimarma*. All of these marma are essential, live saving and having important function in our body. *Sira* means head is a very important vital spot because it is occupied by brain. Function of nervous system is controlled and coordinated by the brain; injury to this organ may cause internal or external hemorrhage, inappropriate intra cranial pressure, necrosis to important vital center of cerebral hemisphere, ultimately which may result paralysis, coma or death. Brain is the center portion of central nervous system through which all sensory and motor functions are coordinated. Brain is supplied by circle of willis¹⁵, venous blood is drained out by superior, medial and inferior Saggital sinus, juglar vein, facial vein, occipital vein. Brain is the main component of the central nervous system having 12 pair of cranial nerve through which autonomic nervous system is controlled. Pitutary gland which is a master of endocrine orchestra also resides within the skull. Pitutary controls the entire endocrine system. Hypothalamus, limbic system, pons, medulla oblongata also lodges within the skull. Vital center of cerebral hemisphere is responsible for sensory and motar reflexes. Cardiac and respiratory center lies in the medulla and it works with the help of pons. It proves that head is a

prime vital organ, due to the function of brain as a main component of central nervous system.

BASTI-MARMA

Basti means urinary bladder but when we use the term *basti marma* it should be considered as urinary bladder along with the urinary system. Urinary system that includes kidney, ureter, urinary bladder and urethra plays the most important part to excrete the toxins, free radicals and waste product from our body. In Ayurveda the word *Basti* means 'one that hold the urine' therefore *Basti* means the urinary bladder. Acharya Sushrut in Sushrut samhita¹⁶ explained the anatomical position of *Basti* as it lies in anterior pelvis and is enveloped by navel, back, pelvis region, testicles, anus, groin region and penis. *Basti marma* is situated in *kati* region (lumbar region) having less *mansa* and *rakta* (muscles and blood supply) and acts as reservoir for urine. *Ashmari vrana* (abscess due to calculus) and immediate death may occur. In case of *ashmari* patient dies because *mutrasravivrana*(discharging abscess) is formed¹⁷. According to acharya Charak *basti* is base of *sukravah srotas*, *mutravaha srotas* and *udakwaha srotas* and it lies in the mid of *sthulguda* (rectum), *andkosha* (scrotum), *sevani* (median raphe)¹⁸.

Trauma to urinary bladder can cause rupture of bladder leading to shock and death due to acute infection developing peritonitis and death. A distended bladder may be ruptured by an injury to lower abdominal wall. If peritoneum is involved, it may lead to peritonitis and death. The urinary bladder, a hollow viscous with strong muscular walls, is characterized by its elastic nature. Because of the superior position of the distended bladder, it may be ruptured by injuries to the inferior part of the anterior abdominal wall or by fractures of the pelvis. The rupture may result in the escape of urine extra-peritoneal or intra-peritoneal. Rupture of the superior part of the bladder frequently tears the peritoneum, resulting in extravasations (passage) of urine into peritoneal cavity. Posterior rupture of the bladder usually results in passage of urine extra-peritoneal into the perineum. Both extra peritoneal and intra peritoneal rupture can prove fatal, so *Bastimarma* can be correlated with urinary bladder.

HRIDAYA-MARMA

Hridaya is described as the 'maha marma' by acharya charak which is situated between the breasts and is the seat of *satva*, *raja*, *tama* and *chetana*¹⁹. Any injury either local or general either blunt or penetrating this *marma* may cause fatal complication. *Hridaya* is considered as a *tri-marma* because it is the residency of ten principle *dhamani* (blood vessels, *prana*, *vyana* and *apanvayu*, *sadhak pitta*, *oaja*, *mann*, *buddhi*, *chetana* and *Mahabhuta*, intellect and consciousness and the great proto-elements. *Hridaya* is said as spokes in the nave of the wheel.²⁰*Hridaya* is the residency of above factors so injury on this vital site will aggravate the *dosha* and inhibit the channel of *srotas* that may cause death. Psychological trauma may cause cardiac arrest it proves residency of *mana* in *hridaya marma*. Injury on *hridaya marma* arise *kasa* (cough), *swas* (all respiratory problem), *balkshaya* (weakness, loss immunity), *Kanthasoas* (dryness of throat), emaciation of face and tongue, *apasmar* (epilepsy), *unmaad* (psychosis), *pralapa* (delirium) and *chittanash* (loss of consciousness, coma)²¹

According to sushruta heart is situated between breasts occupying the position in chest at the level of opening of stomach. In thorax the heart is located between both mammary gland and is the site for *satva*, *raja* and *tama*. Amashayadwara (cardiac opening of oesophagus) is located nearby heart.²²

Injury to this *marma* causes immediate death. Direct trauma to heart gives rise to severe hemorrhage and immediate death. Embolism of the pulmonary trunk by a blood clot coming from the right side of the heart in patients with heart disease or from a thrombosed deep vein, after operation is one of the commonest causes of sudden death. The sudden blocking of a coronary artery by an embolus or its more gradual obstruction by arterial disease or thrombosis is the commonest cause of instant death in persons of past middle age. If the obstruction is incomplete patient may suffer from angina pectoris associated with agonizing pain in pericardial region and down the medial side of the left arm and forearm. In spite of collateral circulation there occurs myocardial infarction due to thrombus. Collateral circulation therefore appears to be too

poor to meet the demands during emergencies. Injury or infection of myocardium may cause arrhythmia, bradycardia or tachycardia. A tear in the wall of the heart means ventricular rupture may cause fatal hemorrhage. Loss of cardiac propulsion may cause less blood supply to the tissue of brain causing sudden cellular and central death. Above factors prove that *hridaya* can be correlated with heart with cardiovascular system but when we use the *hridaya-marma* it should be used for heart along with its vessels, lymphatic channels, nerve, muscles and ligaments. Ascending aorta, arch of aorta, thoracic aorta and its branches supplies the whole body. Inferior and superior vena cava drains in the heart which is responsible for venous drainage of body. Deep cardiac plexus, coronary and pulmonary plexus are responsible for the cardiovascular function. All these structures are situated around the heart so when it will be injured it may cause immediate death.

DISCUSSION

Ayurveda is a science of unique treatment method and having scientific objective approach of treatment for healthy life. *Ayurveda* is a life science that's why it elaborately deals with each and every aspects of human life, while describing sharer, *Acharyas* has described about *Marma* which literary means 'vital region' of the body. Any direct or indirect trauma to these sites may prove fatal or can result in disability of the person. Acharya susruta, vagbhat, and charak mentioned 107 *marma* in human body. Among these 107 *marma*, *sira*, *hridaya* and *basti* are more essential and important *marma* according to acharya charak, due to their function and severity of complication. That's why it is mentioned separately as *tri-marma*. The *tri-marma* are the center points of the life, *Tri-marma* is the residency of *prana*, *triguna*. *Tri-marma* is the center of again, *soma* and *vayu*. They are *sadyhapran har marma* and so if injured lead to death within seven days. *Hridaya marma* pumps the *raasa dhatu* to all the parts of the body²³. They are the center of coordination. *Mana* resides in *sira marma* and it is known control of all the *Indriyas*. They are the center authoritative act as the congregate of different *marma*.

They are organ of the three-life sensing system of the body; they work as tripod of life.

CONCLUSION

According to the above study we conclude that *sira* is head along with central nervous system, *hridaya* is the heart along with cardiovascular system, and *basti* is urinary bladder along with urinary system. Injury to these organ and system may cause immediate death due to loss of blood supply, nerve innervations, improper intra cranial pressure, vaso-vagal shock, cardiac arrest and severe infection. According to Ayurveda these *marma sthan* are place of important factors like *prana*, *vyan* and *apanvayu*, *sadhak pitta*, *oaja*, *mann*, *buddhi*, *chetana* and *Mahabhuta*. Imbalance and incorporate function of these factors may cause death. These three *marma* are more essential and work as tripod of life so Acharya Charak mentioned it separately. This *tri-marma* has severe complication on injury, different symptoms so treatment is tougher than other *marma*. Medicine for this *tri-marma* and its preparation is essential, so diseases related with these are mentioned in separated chapters. *Marmas* are given out most importance by all acharyas but acharya susruta had described it in great detail as he belongs to school of surgeons and the knowledge of *marma* becomes mandatory for surgery for the management of wounds. In comparison to an elaborate and tedious description of all structures of the body, knowledge of regional anatomy finds its better scope in management of the injuries involving the *marmas*.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Neha Madhukarrao Kulkarni et al: A Comparative Study Of Trimarma With Special Reference To Hridaya Marma-A Review Article. International Ayurvedic Medical Journal {online} 2021 {cited June, 2021} Available from:

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