



**ANATOMICAL AND PHYSIOLOGICAL CONSIDERATION OF *TRIMARMA* BASED ON
MODERN AND AYURVEDA PERSPECTIVE**

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Article Received on 22/09/2018

Article Revised on 13/09/2018

Article Accepted on 04/10/2018

ABSTRACT

Marma is one of important concept of Ayurveda which resembles various vital points of body related to traumatic effect. The *marma* points generate symptoms, pain or fatal effect when exposed to trauma. There it is recommended to protect these points from injury or trauma. These *marma* points are also considered as healing points and using this concept *marmachikitsa* offers *tridosha triguna samanway* effect. *Trimarma* represents *Shira*, *Hridaya* & *Basti* resembling emergency aspect of Ayurvedic treatment. *Trimarma* are mainly associated with three different systems of the body; Nervous system, Cardio-vascular system & Urinary system. This article represents a view on the concept of *Trimarma*.

KEYWORDS: Ayurveda, Trimarma, Shira, Hridaya & Basti.

INTRODUCTION

Marma explained as main anatomical area of body which associated with *Prana* and offers vitality to the life organs. These points are very sensitive towards the feeling of pulsation and pain on application of pressure. *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi* (“*Marmaninama Mamsa Sira Snayusthi Sandhi Sannipatha*”) are important parts of body which are to be considered in case of emergency and medical treatment. *Marma* points are also used in surgery and symptoms on traumatic injury. Depending upon traumatic effects *marmas* mentioned as follows:

1. Sadhyapranahar
2. Kalantarpranahar
3. Vaikalyakar
4. Vishalyaghna
5. Rujakar

Marma therapy involves utilization of *abhyanga* and *mardana* to balance the *tridoshas* at physical level and *trigunas* at mental level. The specific *marma* widely used in anatomy and *Shalyatantra* for the therapeutic & precautionary measurement. *Marmas* is seat of spirit of the soul (*Prana*).

TRIMARMA

- Shira
- Hridaya
- Basti

Marma when collapsed then fatal effect may be observe therefore these are considered as places where the *prana* reside. The three specific places where identified as *trimarma*, anatomically any minor injury to these places directly affects functions of the important organs. These *marma* possesses *sadyah-pranahara* characteristic and thus act as center of *Agni* and *Vata dosa*. Physiologically these places play vital role in maintaining normal health. Anatomically *Hridaya* and *Basti* hold specific positioning amongst all other *marma*.

Hridaya as Trimarma

Hridaya is the residency of 10 arteries & veins, *Prana*, *Apana Vayu*, *Mann*, *Buddhi*, *Chetana* and *Mahabhuta*. The residency of *Mana* proved in *Hridaya Marma* as major psychological trauma plays a role to cardiac arrest. *Hridaya* as a *Kosthanga* has anatomical feature like heart however somewhere it has been written that *Hridaya* and *Basti* as a *Kosthanga* possesses distinguishes from *Hridaya* and *Basti Marma*. *Hridaya Marma* is located in chest above *Hridaya* *Kosthanga* superficially; considering *Hridaya* as heart. It is a type of *Sadyapranahara* and *Shira Marma*; center of *Agni* & *Vata Dosa* and many *Sira* resides around this region. It is also act as place of *Satva*, *Raja* and *Tama* (*Trigunas*), thus plays vital role towards the physiology of *Hridaya*. Anatomically and physiologically *Hridaya Marma* contributes significantly hence included as one of the important *Trimarma*.

BODY PARTS ASSOCIATED WITH HRIDAYA MARMA

It is situated at near the cardiac orifice (*Amashayadwara*) between two breasts. When this *marma* gets affected other parts may also involved such as;

- Dasha Dhaamanis (main vessels related to the heart)
- Aorta
- Pulmonary trunk
- Four Pulmonary Veins
- Superior Vena Cava
- Inferior Vena Cava
- Right Coronary Artery
- Left Coronary Artery
- S.A. Node
- A.V. node
- Purkinje Fibers
- The Bicuspid Valve
- The Tricuspid Valve

Injury to these blood vessels; coronary veins or arteries leads to myocardial infarction or ultimately death.

Shirah as Trimarma

Shirah is also important Trimarmas, it has 37 different Marmas on hand. It is considered as Uttamanga since these are the major parts of body. It acts as vital organs of body which carries Prana and sense faculties. Sense organs and channels transport sensory and vital impulses from the Shirah thus correlated with brain. Any minor injury to this organ leads death or noxious symptoms. Acharya Vagbhat has compared human being as tree with roots and branches, head defined as site where sense organs reside along with the Prana. Therefore it is considered as supreme of all other organs since it controls consciousness. Vagbhat described 10 Jivita Dhatu including; Shirah, Rasanabandhana, Kantha, Asra, Hridaya, Nabhi, Basti, Sukra, Ojas and Guda. Shirah he described as Jivita Dhatu also play vital role as one of the important Trimarmas. Shirah sometimes also considered as Pradhana Marma amongst 107 Marmas of the body. It is a Sadyopranahara Marmas, injury to Shirah may lead death or serious complication such as; rigidity of the neck, facial paralysis, agitating eyes, constricting pain, loss of movement, dyspnoea, trismus, stuttering speech, yawning fits, aphasia and facial asymmetry. Shirah anatomically located all over the body inside the skin layers and help to transport vital constituents from one place to another. Rakta mainly transported through Shirah along with prana. The anatomical origin of Shirah resides around Hridaya and spread all over the body distinguish from other on the basis of oxygenated or deoxygenated blood.

BODY PARTS ASSOCIATED WITH SIRA MARMA

- Apanga
- Matrika
- Parsvasandhi
- Phana
- Apalapa
- Urvi

- Nabhi
- Brhati
- Supraorbital Vein
- Nasal Arch
- Angular Vein
- Occipital Vein

When these *marmas* injured *vayu* increased and encircles the *siras* leading to severe pain. The injury to *siras marmas* affects artery, vein and nerve.

Basti as Trimarma

Acharya *Susruta* gives importance to *Basti* as organ of *Prana* while Acharya *Charak* emphasized *Basti* as *Trimarma*. It is the region of *Sthula Guda*, *Muska*, *Sevani* and *Nadi* channels. These places help in the excretion of various materials; *Mutra* and *Sukra*. All *Ambuvaha Srotas* which transporting water fills the *Basti* as river meets together at single place. Acharya *Vagabhat* described surgical description of *Mutra Ashmari* treatment and emphasized that injuring to *Mutravaha Srotas* – *Basti* may resulted death of the person if improper surgical intervention take places.

BODY PARTS ASSOCIATED WITH BASTI MARMA

This *marma* greatly affected by downward-moving air (*Apana Vayu*) at site of *Vata*'s accumulation and injury to this *marma* may affects:

- Area above the bladder
 - Lower abdomen
 - *Mamsavaha srotas* (Muscular system)
 - *Medovaha Srotamsi* (Bodily fat)
 - *Mutravaha srotas* (Kapha and the urinary system).
- Physiological Importance of *Trimarma*

Trimarmas are the center points of life; *Prana* & *Trigunas* reside in these region. These *marmas* are center of *agni*, *soma* and *vayu*. They act as *Sadyanpranahara Marma* since they served as central source of energy. *Hridaya Marma* physiologically pumps the *Rasa Dhatu* to all the parts of the body. It acts as central coordination point of body. Similarly *Shira Marma* associated with *Mana* and act as central control system of the *Indiriyas*. *Basti* is the region associated with opening of body such as; *Sthula Guda*, *Muska* and *Sevani*. It clears channels and help in the excretion of various materials from body. *Ambuvaha Srotas* transporting water fills the *Basti* which vital role towards the management of various diseases.

DISCUSSION

Trimarma are the points where excessive pulsation may felt due to the *marmabhighat*. The shock or trauma may occur due to the failure of cardiogenic & vasogenic system, conduction pathway and injury to *shariramukha*.

The following common signs and symptoms on *Trimarma* may observe as a result of *marmabhighat*:

- ❖ *Vikshepa*
- ❖ *Shaithilya*

- ❖ *Daurbalya*
- ❖ *Vepana*
- ❖ *Shunyata*
- ❖ *Hrid-daha*
- ❖ *Asthirata*

Hridaya is *Pranayatana* and *Moolsthan* of *Rasa & Rakta Vaha Srotas*. *Hridaya Marma* is related with *Vayu*, *Sadhak Pitta*, *Avalambak Kaph & Ojhas*. *Hridaya Marma Paripalanam*; protecting from injury & nourishment of *Hridaya Marma* helps to prevent *Hridaya Roga*. *Hridaya* and *Sira Marma* located in the *Madhya Shareera* or *Uras*.

Vasti is a *Snayu Marma*, located in *Madhya Shareera* or *Udara* and act as a *Sadhyo Pranahara Marma*. *Basti Marma* included urinary bladder, hypogastric plexus & ureters, any injury to these parts may lead fatal effects.

The surgical interventions related to *Sirah Marma* need great anatomical consideration since any misconception related to anatomical framework may causes failure of surgical object or even emergency conditions.

CONCLUSION

The modern science emphasized importance of three organs; brain, heart & lungs, any injury to these organs affects the health status of body and may lead condition of emergency. Similarly the ancient *Acharyas* specified *trimarmas*; *Shira*, *Hridaya* and *Basti*, however *Basti* & lungs can't be considered as similar physiological organs and differences arises between them anatomically also. All the *Marma* have common symptoms as anticipating response to *Abhighata* (trauma etc.). Trauma to *Hridaya Marma* may lead *Unmada*, *Javra* when involved in *Hridaya Marma* it is called *Hridayagata Jvara*. *Trimarma* also play clinical significance; diagnosing of disturbed functioning of *Trimarma* may provide ideas about chronic diseases (*Vyadhi*). However the surgical intervention or puncturing of these *marma* requires great care to avoid any harm. The proper physiological and anatomical knowledge of *Trimarma* helps physician to control prognosis (*Sadhyasadhyata*) of disease.

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