



**THE CONCEPT OF MARMA IN AYURVEDA**

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Article Received on 09/01/2019

Article Revised on 29/01/2019

Article Accepted on 19/02/2019

**ABSTRACT**

The description of *marma* is a specialty of *Ayurveda*. This is a part of *Ayurveda sharira shastra*. Such a description is not seen in any of the Medical System. Literarily, the *marmas* can be interrupted as the vital points. These *marma sthanas* are specified, so as not to have interference with the surgeon's knife hence considered as the surgical points. In Modern Surgery, they have not described the *marmas*. But in Surgical surface markings, they are careful to avoid the nerves, arteries, veins...etc which are vital points. The *marmas* are the conglomerating points of these vital elements. Any injury to these parts will produce fatal results. According to *Ayurveda*, there are 107 *marmas* in the body. They are classified into several groups based on the anatomical structure, injurious effects, dimensions and number of *marmas*. Though the description and the *viddha lakshana's* of these *marmas* are available in the *samhitas*, the structures like muscles, ligaments, tendons, arteries, veins, nerves etc. present in these regions, their anatomical description and their applied aspects need more clarification.

**KEYWORDS:** *marma, sira, marmabhogata, vital point, pain.*

**INTRODUCTION**

*Marma* is one of the most widely described and at the same time one of the most debated topics in our *samhitas*. *Marmas* are the vital points when afflicted can cause death and need the utmost care while performing surgical procedures. The details of *marma* are present not only in our scriptures but also in *Vedas, Upanishads, Itihaasa* and *Puranaas*. Apart from our *Samhitas*, Roman and Greek mythology mention warriors who guarded their cardinal points in the body with metal shields.

*Marmas* are situated in various regions of the body. If any injury to the *marma* points that leads to deformity of the structures, produces severe pain, loss of movements, and even sometimes there may be death. The *marma* is still holding the power of anatomists and surgeons in high amount. It seems that *Acharyas* have described the regional anatomy in relation to the surface anatomy of *marma*. Every *marma* holds its own clinical importance and significant scientific values, while on research none can ignore this.

**Review of Literature**

**A. Origin**

The origin of *marma* is mainly related to war. People observed some of the points or areas in our body having a vital role in body mechanisms. These observations were done mainly during wartime and handling patients with emergencies such as injuries. The Scholars of the

ancient times recognized 107 such vital points.<sup>[1]</sup> They called them as *marmas*.

**B. Definition Of *marma***

- *Acharya Sushruta* has defined *marma* as the anatomical site where *mamsa, sira, snayu, sandhi* and *asthi* meet together. Some experts are of the opinion that it does not mean that all the structures must be collectively present at the site. *Prana* dwells at these sites and so they are important.<sup>[2]</sup>
- *Dalhana*, the redactor of *Sushruta samhita* has opined that *marma* is one which causes death. The vital spots if injured can cause death.<sup>[3]</sup>
- *Narahari* the author of *Rajanighantu* defined *marma* as the seat of life.<sup>[4]</sup>
- *Acharya Charaka* has opined that it is the site of *chetana*, so the sense of pain will be more in this region compared to other parts of the body.<sup>[5]</sup>
- *Ashtanga Hrudayakara* has defined *marma* as the site where *mamsa, sira, snayu, asthi, sandhi* and *dhamani* confluence. He has also said that the sites which are painful, tender and show unbearable throbbing after getting afflicted with an injury should also be considered as *marma*.<sup>[6]</sup>
- *Arunadatta*, the redactor of *Ashtanga Hrudaya* explains that it is called as *marma* because injury to that particular part brings out miseries equivalent to death.<sup>[7]</sup>

- *Marma* are that part of the body which exhibits a peculiar sensation or unusual throbbing and causing pain on pressure.<sup>[8]</sup>

All the above definitions show the importance and vitality of the *marma* points. Any injury, trauma or disease affecting *marma* will cause death or miseries equal to death.

### C. Number and classification of *marmas*

According to *Ayurveda*, there are 107 *marmas* in the body. They are classified into several groups based on the anatomical structure, injurious effects, dimensions and number of *marmas*. 'Dalanhacharya' states that though *marmas* can be classified into many subtypes, all of them can be included in five principal types explained by *Sushrutacharya*.<sup>[9]</sup> This principle is also applicable to 'Dhamani' *marma*, described by *Vaghabhattacharya*.<sup>[6]</sup>

All the 107 *marmas* 29 are classified into five different groups

1. Regional classification (*Shadangbhedena/avayavabhedena*)

**Table 1: Structural classification of *marma*.**

Name of the <i>marma</i>	<i>Sushruta</i>	<i>Vagbhata</i> <sup>[12]</sup>
<i>Mamsa Marma</i>	11	10
<i>Sira Marma</i>	41	37
<i>Snayu Marma</i>	27	23
<i>Asthi Marma</i>	08	08
<i>Sandhi Marma</i>	20	20
<i>Dhamani Marma</i>	-	09

### 3. Prognostic classification

Depending on the prognosis of *marmabhighata*, it is divided into five types by *Sushruta*<sup>[13]</sup> and *Vagbhata*.<sup>[14]</sup> They are

1. *Sadyopranahara*- 19
2. *Kalantarapranahara*- 33
3. *Vishalyaghna*- 03
4. *Vaikalyakara*- 44
5. *Rujakara*- 06.

### 4. Dimensional classification

*Sushruta* and *Vagbhata* explained the dimensions of all 107 *marmas* in *angulas*. This is for the surgeons to get an

### 5. Numerical Classification

**Table 2: Classification of *marma* based on numbers.**<sup>[16]</sup>

One in number	<i>vitapa, kakshadhara, guda, basti, hrudaya, nabhi, sthapani, adhipati</i>
Two in number	<i>gulpha, janu, stana moola, stana rohita, apalapa, apasthambha, Katika taruna, kukundara, nitamba, parshva Sandhi, bruhati, amsaphalaka, amsa, krukatika, viduara, phana, apanga, aavarta, Utkshepa, shankha</i>
Four in number	<i>kshipra, talahrudaya, koorcha, koorcha shira, indra basti, ani, urvi, lohitaaksha, srungataka</i>
Five in number	<i>Seemanta</i>
Eight in number	<i>matruka</i>

### D. General structure of *Marma*

*Marma* consists of aggregate of *mamsa, sira, snayu, asthi, sandhi* in which particularly *Prana* by nature stays. In persons generally *soma(kapha), maruta (vayu), tejas (pitta), rajas, satva*, and *tamas* along with *atma* stays in

2. Structural classification (*Asrayabhedena*)
3. Prognostic classification (*Vepathbhedena*)
4. Dimensional classification (*Manabhedena*)
5. Numerical classification (*Sankhyabhedena*)

### 1. Regional classification

*Sharira* is divided into 6 parts. They are *shiras* (head), *antharadi* (thorax and abdomen), 2 *bahu* (upper limb), 2 *sakthi* (lower limb). Among 107 *Marmas*, there are 44 present in the *sakthi* (11 in each extremities), 3 in *Koshta*, 9 in *uras* (thorax), 14 in *prushta* (back) and 37 *Jathroordha* part (head and neck).<sup>[10]</sup>

### 2. Structural classification

*Sushruta* has opined that *marma vasthu* or constituting elements of *marma* are *mamsa, sira, snayu, asthi* and *sandhi*. He classified *marmas* according to the predominance of each structure present in that area such as *mamsa marma, sira marma, snayu marma, asthi marma* and *sandhi marma*. He also said that apart from these 5 types no other types are found.<sup>[11]</sup>

exact idea of the surface anatomy while performing surgical procedures. According to the dimension of *marma*, it is divided into 5 types.

1. *Swa-panitala*
2. *Ardhangula*
3. *Ekanigula*
4. *Dwayangula*
5. *Trayangula*

It is also told that surgical operations should be performed after considering the measurement of the *marmas* so as to avoid them. Even an injury to its borders might lead to death. So the site of *marmas* should be avoided altogether.<sup>[15]</sup>

*marmas*, that is why they do not survive if injury takes place on *marma*. By injury *sharirika* and *manasika dosha* are aggravated which destroy body and mind and finally, *atma* leaves the body.<sup>[17]</sup>

### E. Importance of *marma*

Acharya Charaka quotes in *Siddhi-sthana* that the importance of *marma* is known by the fact that it has extraordinary relation to *prana* and hence any minor injury to *marma* leads to major problems.<sup>[18]</sup>

*Sushruta* explained in *Sharira sthana* that, when vital spots are injured living beings do not survive.<sup>[19]</sup> Knowledge of fatal spots is described as half of the knowledge of *Shalya tantra*, since persons injured in the fatal spots die quickly; and if anyone survives by the efficiency of the physician, he is sure to suffer some kind of deformities.<sup>[20]</sup>

The wise say that only after knowing the width of the fatal spots, activities of using the knife should be done; injury done even to the sides of the fatal spots can kill the person; hence fatal spots should be avoided carefully. No injury to the fatal spot is either mildly dangerous or undangerous.<sup>[21]</sup>

In the olden times, the knowledge of *marma* was important for-

- Self-protection during the war.
- To defeat the opponent during the war.
- In the prognosis of the disease. (ie, if *marma* is involved, it becomes *krichrasadhya*)
- Acts as the superficial pressure point thus to treat easily.

Also, *marmas* are said to be the seat of *prana*. To be the seat of *prana* means,

- To be the utmost importance of life.
- To control the bodily functions.
- To act as the center of energy.

In *Siddhi sthana*, Charaka emphasizes the importance of these *marmas* in relation to other *marmas*. He says that there are 107 *marmas* including the *sakha* and *skanda*. He says that comparatively more pain will be felt in

these particular parts than the other parts of the body because the *chetana* is seated in these parts. He continued that among these *marmas*, the *skanda marmas* are more important than *sakha marmas* because the *sakhas* depend on the *skanda*. *Chakrapani dutta* elaborated it says, *skanda marmas* represents the *marmas* of the *koshta*, *prishtha*, *ura*, *jatru* and *urdhwa*. *Sakha marmas* represents the *marmas* of *bahu* and *sakti marmas*. Injury to *skanda* will affect the *sakha* because *sakhas* are connected with the *skanda*. Furthermore, the existence of the *sakhas* depends on the nourishment as *rasa*...etc which are circulated to them from the *skanda*.<sup>[22]</sup>

### F. General symptoms of *marma vidhya lakshana*

**Vishama spandana-** Variation in the pulsation of vessels in pulsatory places of particular *marma pradesha* is due to *vidhya* and structural impairment.

**Vishama ruk-** Deferent type of pain will be felt on putting pressure on *marma vidhya pradesha*.<sup>[23]</sup>

### Antah (peripheral region) *vidhya* and *Madhya vidhya lakshana*<sup>[24]</sup>

The structure of the *marma* generally includes 2 parts, *madhya* and *antah* (peripheral region) parts.

**Madhya vidhya (central region)** – Injury to the *madhya* (central part) of the *marma* occurs, and then cardinal symptoms related to particular *marma* appears. Example- *shankha marma madhya vidhya* leads to death.

**Antah (peripheral region) *vidhya***- Injury to the *antah* (peripheral region) *pradesha* of the *marma* occurred then instead of showing cardinal signs; it converted in to successive *marma lakshana*.

Also *Marmaghata* leads to *dehprasupti*, *guruta*, *sammoha*, *shitakamita*, *sweda*, *murcha*, *vamihi*, *swasa*.

**Table 3: Viddha lakshana of *marma***<sup>[25]</sup>

Name of the <i>marma</i>	<i>Viddha Lakshana</i>
<i>Mamsa marma</i>	There will be continuous bleeding, the viscosity of blood is reduced, blood resembles meat washed water, pallor of the skin, loss of function of sense organs & quick death of the person.
<i>Snayu marma</i>	There will be bending of the body, convulsions, very severe pain, inability for riding, sitting etc. distortions of <i>anga</i> or even death of a person.
<i>Sira marma</i>	Blood which is thick flows out of <i>sira</i> continuously in large quantity, due to blood loss, thirst, giddiness, dyspnoea, delusion, unconsciousness and hiccup manifest leading to the death of a person.
<i>Asthi marma</i>	discharge of thin fluid mixed with bone marrow intermittently and severe pain continuously.
<i>Sandhi marma</i>	The site of injury feels as though full of thorns, even after healing of the wound there is the shortening of the arm, lameness, the decrease of strength and movement, emaciation of body and swelling of joints occurs.
<i>Dhamani marma</i>	The blood flows out frothy and warm comes out with a sound and the person becomes unconscious.

### DISCUSSION

The origin of *marma* can be traced back to the *Vedic* period. Its references were also found in *Upanishads*, epics like *Ramayana*, *Mahabharata*, and as well as the ancient medical science. The word *marma* derived from

the *Sanskrit* root ‘*mru*’ and applies to a part or a spot of vital importance in the body, which if injured results in serious consequences it also denotes vital force of life.

The ancient surgery in India primarily associated with warfare. Though the knowledge of anatomy was not too accurate and was deficit about many important structures it is surprising to find the phenomenon growth and excellence of Indian surgery during the period of *Sushruta*. Surgical operations demanded accurate knowledge of anatomy but it seems, the concept of *marma* has supplied them with the knowledge of regional anatomy and the structures involved in the region and considered the knowledge of *marma* as half the knowledge of surgery and it was the mastery of knowledge of these *marmas* that might have helped for the growth of surgery in ancient age.

In *marma* regions, there is anatomical convergence of structures like *mamsa*, *sira*, *dhamani*, *snayu*, *asthi* and *sandhi*. Generally, one or more of the above anatomical structures are present at the mentioned sites. As per the majority of the structures present at the sites the type of the *marmas* is decided i.e. *mamsa marma* etc. It is not bided by law that all these structures are must to be present at the *marma sthana*. However, the *marmas* with more confluence turn out to be more hazardous than the one with less ones.<sup>[2,3]</sup>

As we understand, *marma* is a reservoir of *prana*. The *prana* pervades every cell of the body through the innumerable *nadis* in which it moves or flows. There are *dasha pranayatanas* told in *Ayurvedic* Classics, generally, *soma (kapha)*, *maruta (vayu)*, and *tejas (pitta)*, and *rajas*, *satva*, and *tamas* along with *atma* stays in *marmas*, that is why they do not survive if the injury takes place on *marma*. That is why named as *prana*.

The four types of *siras* carrying the *doshas* and *rakta* separately are connected with all the *marma* as well. In case of trauma, blunt or piercing over the *marma* there will be bleeding leading to *dhatukshaya* there by resulting into *vata prakopa* in turn mobilization of *pitta* and its vitiation. Thus causing severe pain accompanied by *trishna*, *shosha*, *bhrama* and later death preceded by excessive sweating.<sup>[26]</sup> *Sushruta* emphasis more on *vata prakopa* and its role in destroying normal physiological function or homeostasis. It is reflex vasodilatation and fall in blood pressure, loss of consciousness. And sometimes leading to death, if it is an irreversible type of shock. It is a systemic effect of the mechanical injury.

In view of modern pathology also the death in *marmabhighata* is the result of shock. shock is defined as the disparity between volume and space and it is the sudden derangement of the physiological functions. A mechanical injury at any part of the produce reflex vasodilatation, fallen blood pressure and loss of consciousness and death. Hence *marmabhighata* will definitely produce reflex vaso-dilatation unbelievable amount of blood flows from vascular system to the interstitial spaces.<sup>[27]</sup>

So it may be considered that after the *abhighata siras* of affected *marma* may produce vasovagal reflexes due to *vata prakopa* and *raktasrava*. Thus it is obvious that *marma* is susceptible points to traumatic shock especially, which are located in the head & neck, chest and abdomen including pelvis.

In the science of surgery, in a case of surgical operation, the situation and dimension of each local *marma* should be first taken into account and the incision should be made in a way as an incision, even extending or affecting in the least, the edge or the side of the *marma*, may prove fatal. Hence, all the *marma sthanas* should be carefully avoided in surgical operation.<sup>[28]</sup>

*Marmas* are said to be cover half of the Jurisdiction of surgery because persons die immediately if they are injured even if some of them survive due to surgeon's efficiency they definitely become a victim of disability.<sup>[22]</sup> Detail knowledge of *marma* is important from the surgical point of view; surgical procedures like *agnikarma*, *ksharakarma* & *shastrakarma* are used as a part of the surgery. In this surgical procedures, the knowledge of *marma sthana*, is required, with proper knowledge of *marma sthana* we may perform the procedures without any complications. In trauma condition the knowledge of trauma site, structures involving and deformity identification is necessary. So treatment and surgical procedures the study of different aspects of *marma* is important. Even in today's fast life it is very important to protect our *marma sthanas* because of heavy road traffic which results in accidents causing injury to *marmas*. Developing science invents new military armaments increasing the severity of injury during war.<sup>[29]</sup>

## CONCLUSION

1. If a close observation is made, we will come to know that the knowledge of *marma vijnana* was extensively well known since *Vedic* period (4000BC). Later on, its progression can be observed in the *Samhita granthas* especially *Sushruta samhita sharira sthana*.
2. The various classical texts of *Ayurveda* have defined *marma* as a reservoir of *prana*, the seat of *tridosha* and *triguna*, *atma*, *chetana*, a conglomeration of *mamsa*, *sira*, *snayu*, *asthi*, *sandhi* making the place vulnerable to injury.
3. The Symptoms produced after *marmabhighata* are to that of traumatic complications viz shock, functional deformity, if not treated properly lastly leads to death.

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