

# A Bird's Eye View On *Marma* Science

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## ABSTRACT

In *Ayurveda*, the *Marma* has been considered as a very vital part, having agglomeration of number of tissues and other body structures accounted to be vital point in the human body. Besides the immense advancement in western medicine, the mystery in relation to structural as well as functional integrity of the human body, remains unsolved even today. The scientist finds great difficulty, even today, in establishing the link in between the certain ultra microscopic structures of the body and their responses in terms of neurohormonal secretions. The concept of *Marmas* as advocated by *Acharya Sushruta* grossly speaks about the juncture of various cross structures, which when injured are liable to precipitate various types of complications.

**KEYWORDS:** *Ayurveda*, *Marma*, ultra microscopic structures, neurohormonal secretions, vital part

## INTRODUCTION

The term '*Marma*' literary means the sense of vital parts of the body. The term *Marma* has derived from the *Sanskrit* root word '*Mri*'. It is a first singular form of the word *Marman* and is very often used in the sense of *Jivasthana*, *Sandhithana* and *Tatparya*<sup>1</sup>.

The definitions of the term '*Marma*' in various *Ayurvedic* texts and the commentaries are the real mirror to reflect the proper understanding, the nature and the importance attributed to this particular word, when viewed in the light of medical sciences. *Maharshi Charaka* accounts the *Marma* as the vital part and the seat of *Pranas* in the body. In *Siddhithana*, emphasizing upon some of the vital organs like *Hridaya* (heart), *Murdha* and the *Vasti*, he has clearly stated that the *Prana* or vital breath of man resides over there; hence one should take utmost care to protect them. Further, dealing with the protections of these vital parts, he has specially pointed out a constant avoidance of impending factors, observance of the code and conduct for the health and remedies of disorders<sup>2</sup>. According to him, there are 107 '*Marmas*' located in the body. In case of affliction in any one of them, may leads to excruciating pain as the consciousness is specially attached to them. The *Marmas* located in the trunk are most important than that located in the extremities, because the latter are dependent on the former. The *Hridaya*, *Vasti* and *Sira* are important *Marmas* of trunk and head because they empower energy to the remaining *Marmas* of the body<sup>3</sup>.

Based on definition of *Sushruta*, the *Marmas* are juncture place of *Sira* (Veins), *Snayu* (Nerves), *Sandhi* (Joints), *Mansa* (Muscles) and *Asthi* (Bones). The *Prana* are specifically situated in these '*Marmas*' by the virtue of their nature. Trauma to any one of these *Marmas* invariably causes physical disturbance in accordance with their particular types<sup>4</sup>.

## METHODOLOGY

The study has been carried by adopting the following path-

- Researcher had explored the concerned literature, which is available in *Ayurveda*.
- Researcher had collected and reviewed the views of commentators.
- Researcher had analyzed *Ayurvedic* concepts with recent advances in knowledge.

The critical, scientific analysis and explanation of related *Shlokas* and the *Sutras* which are deep rooted or hidden in scientific world and approaches given by our ancient and modern scholars in reference to *Marma* Science has been collected and reviewed to provide the new dimensions for the research.

## MARMA LITRATURE IN ANCIENT CLASSICS OF AYURVEDA

### *Charaka Samhita* -

In twenty-ninth chapter of *Sutrasthana*, while dealing with the ten *Pranayatanas* there is mention of three *Marmasthanas*, that is, *Shira* (head), *Hridaya* (cardiac area) and the *Vasti* (hypogastric region). It has been said that in these *Pranayatanas*, the *Prana* (life principle) remains seated<sup>5</sup>. But the description given in seventh chapter of *Sharirasthana* speaks about six *Marmasthanas* that too in very context of the ten *Pranayatanas* being dealt over there. Here in addition to *Shira* (head), *Hridaya* (cardiac area) and the *Vasti* (hypogastric region) as described in *Sutrasthana*, three more *Marmasthanas* like *Kantha* (neck area), *Nabhi* (umbilical area), *Guda* (anal area) have also been incorporated as the *Marmasthanas* in the body<sup>6</sup>. In this context out of ten *Pranayatanas*, six *Pranayatanas* have been considered to be seat of *Prana* or life. But if we look upon the remaining four *Pranayatanas* i.e. *Ojas* (essence of the *Dhatus* or tissues), *Shukra* (semen), *Shonita* (blood), *Jihvabandhana*, they also qualify the features of presence of *Prana* or life in them. In another context of the same chapter, *Maharshi Charaka* while enumerating the other body structures has clearly accounted 107 *Marmasthanas* in the body<sup>7</sup>.

In *Chikitsa Sthana* emphasizing upon the *Shira* (head), *Hridaya* (cardiac area) and the *Vasti* (hypogastric region) of the body, it has been very specifically indicated that out of 107 *Marmasthanas* described all over the body<sup>8</sup>, these are the special seats of *Pranas* or life. In his opinion, one should be very much cautious in protecting oneself with the disastrous likely to precipitate in these *Marmasthanas* due to deranged *Vatadika Doshas*, which ultimately affect the *Prana* of the individuals<sup>9</sup>.

Further, in twenty sixth chapter of *Chikitsa Sthana*, dealing with the *Shirorogas* more specifically concerned with the diseases occurring in the nasal passages the text has very well illustrated the etiopathogenesis lying behind them. Considering the *Vayu* as one of the prominent causative factors, remains seated in the head area and from there it influences the *Marmas* situated in nasal passages and thus gives rise to *Kshavathu* (sneezing) like complaints in human being<sup>10</sup>.

In ninth chapter of the *Siddhi Sthana*, it has been rightly stated that 107 *Marmas* described all over the body are precisely situated over the trunk and the extremities, in particular. Hence one should be very much careful to protect these *Marmas* from intrinsic (*Doshadika*) and extrinsic (outer injuries) factors<sup>11</sup>. Out of three *Doshas*, it is advisable to protect the *Marmasthanas*, particularly from the *Vayu*<sup>12</sup>. Leaving aside all the causative factors leading to disturbances in these *Marmasthanas* one must protect them by following the code and conduct of healthy life and eliminate the diseases by their appropriate management<sup>13</sup>.

### *Sushruta Samhita* -

In *Sushruta Samhita*, the sixth chapter of *Sharirasthana* has been completely devoted to deal with the details of the *Marmas* i.e. the types, their locations and structures as well as the related pathophysiological changes. It is one of the most important subjects of *Ayurveda* carrying great significance in view of surgery. Showing the importance of *Marma*, *Maharshi Sushruta* has rightly said that “an injury on *Marmas* definitely causes death. If one is saved after an injury to *Marmas* due to an expert treatment by a wise surgeon, the patient is definitely prone to suffer from disabilities. Therefore, the knowledge of *Marmas* as said by *Sushruta* is the half knowledge of the *Shalya Shastra* (surgery)”<sup>14</sup>. It is a common opinion of the *Shalya* expert that by keeping in mind the particular measurement of the *Marmas*, the surgery should be performed. Because the injury made very near to a *Marma* region can prove fatal, therefore, *Marma* region (vulnerable areas) must be excluded from surgery<sup>15</sup>.

Commenting on the term *Sannipata*, the commentator ‘*Dalhana*’ takes it as a close relationship in between the *Mansa*, *Sira*, *Snayus*, *Asthi* and *Sandhi* depending upon the predominance of the particular constituent structure, they have been designated accordingly<sup>16</sup>. The word *Bhava* explains, the results leading to immediate death, death after sometime, to produce disability or pain, in the body. In addition to these the *Bhrama* and *Pralapa Bhavas* (symptoms) are also considered over here.

Injuries to *Marmas* leading to death or unbearable pain have been general experienced by expertise persons in the field of surgery. It is evident from the text describing the significance of *Marmas* based on their sites or locations on the body. The *Marmas* situated in the trunk area are more significantly severe than the *Marmas* situated on the extremities. Supporting this fact *Sushruta* has clearly stated that “when the *Shakha Marmas* are injured the blood vessels lying there constrict and there are less chances of Haemorrhage. Such a person undoubtedly suffers great without limbs, but he does not die like a tree whose branches are cut”.

He has further stated that, there is no *Marma* which may not produce little harm or no harm. Generally, a man after getting an injury to a *Marma* becomes either disabled or dies. The pathological changes produced at the site of *Marmas* are most difficult condition to be treated. Even if they are treated with the greatest care under an expert surgeon, complications are sure to follow<sup>17</sup>.

#### ***Kashyapa Samhita -***

The *Kashyapa Samhita* has also described ten types of *Pranayatanas*. Enumerating the number of *Pranayatanas* the text has mentioned the *Murdha* (vault of head), *Hridaya* (cardiac area), *Vasti* (hypogastric area), *Shonita* (blood), two *Shankha Pradeshas* and lastly the *Guda* (rectum area), where the *Prana* (life principle) is said to be situated. Out of these *Pranayatanas* the *Murdha* (vault of head), *Hridaya* (cardiac area) and *Vasti* (hypogastric area) have been given great importance and recognized as *Maha Marmas* (most vital areas) of the body. In comparison to *Charaka Samhita*, the *Kashyapa Samhita* has attributed greater significance to these three *Maha Marmas* as evident with the word “*Maha*” used before the term of *Marmas*<sup>18</sup>. In another context, in view of therapeutic significance of *Marmas* in general, it has given an appropriate directive in respect of *Vranas* found in children as well as in women having recent delivery. The text has revealed that one should not tackle or operate upon the *Vranas*, if they are situated at *Marmasthanas* of these above said subjects. In these situations, it has been rather preferred to apply the cow curd mixed with salt on the abscess area and allow them to heal up in their own way<sup>19</sup>.

#### ***Ashtanga Sangraha -***

The *Ashtanga Sangraha* also mentions about ten types of *Pranayatanas*. The *Vridhdha Vagbhatta* has also accepted the view of *Charaka* and *Kashyapa Samhita* in respect of *Prana* being situated in these *Pranayatanas*. He has recognized seven ‘*Mahamarmas*’ that is *Murdha* (vault of head), *Jihva Bandhana*, *Kantha* (neck area), *Hridaya* (cardiac area), *Nabhi* (umbilical area), *Vasti* (hypogastric area) and *Guda* (rectal area)<sup>20</sup>.

Like other seers of *Ayurveda*, *Vridhdha Vagbhatta* has also mentioned 107 *Marmas* distributed all over the body. According to *Vridhdha Vagbhatta*, there are eleven *Marmas* in each extremity, twenty six *Marmas* in the trunk and thirty seven *Marmas* situated above the *Jatru* or head and neck region of the body<sup>21</sup>. He has been also particular in pointing out the consequences precipitating after mild or severe injuries to the *Marmas*. In his view, a little bit of injury to *Marmas* is always very much troublesome and painful to the individual. The diseases directly involving the *Marmas* are always extremely painful even after getting managed with great effort. Hence, one should be always careful to protect these *Marmas* by all means<sup>22</sup>.

The *Marmas*, pervaded all over the body, leading to death even by touch, also protect the body from injury. Therefore, the wise man should always use the dietetics and regimen of life which are always helpful and prolonging the life process, as they contribute to a great extent in protecting or maintaining the life process even when these *Marmas* are pierced or injured<sup>23</sup>. The incorporation of *Rakta Marma* in ten *Pranayatanas*, it appears that the *Vridhdha Vagbhatta* has recognized the significance of the blood in the body while considering the cuts and piercing injuries to these *Marmas*. He has clearly stated that the persons having no blunt injuries on these *Marmas* may lead to death by cut or piercing injuries resulting into excessive and profuse bleeding. The cases having no bleeding or injuries to these *Marmas* may remain alive even by getting pierced with hundreds of arrows<sup>24</sup>.

#### ***Ashtanga Hridaya -***

In *Ashtanga Hridaya* the types of *Marmas*, their number and their locations over the extremities, the trunk and the head-neck areas are similar to that we find in *Ashtanga Sangraha*<sup>25</sup>. In another context, dealing with the means of nutritional supply to whole of the body and which is one of the most important constituents of *Marmas*, the *Vagbhatta* has described four types of *Siras* i.e., *Vata*, *Pitta*, *Kapha* and *Rakta* carrying channels. According to him, these channels remain seated in *Marma sthanas* nourish the whole body and any injury to them may lead to death due to excessive loss of the blood and other *Dhatus*(body tissues) resulting into aggravation of *Pitta* which in turn, causes increased thirst, emaciation, toxicity(unconscious), confusion, severe perspiration, weakness and looseness of the body<sup>26</sup>. Considering the consequences resulting out of the injuries of these *Marmasthanas* and with view of their protections, the *Ashtanga Hridaya* stands with the view of *Vridhdha Vagbhatta*. The text reveals that one should take care of the *Marmas* and protect it from the alkalies, poisons and the fire with great effort, severe injuries to the body away from the *Marmasthanas* may allow the man to survive but partial or full injury at the site of *Marmas* are bound to produce severe pain in spite of getting managed by the expertised persons<sup>27</sup>. Further, dealing



with the therapeutic significance of *Marmabhighata*, *Vagbhatta* has advocated an immediate cut or incise the part of the body at their juncture or joints, by this process the blood vessels get constricted thereby letting of the blood gets stopped and the life is saved. He has recognized the blood as a factor responsible for life<sup>28</sup>.

### *Sharangdhara Samhita* -

*Sharangdhara Samhita* also speaks about 107 *Marmas*<sup>29</sup> and accepted the *Marmas* as a place where life principles remain seated. This is the view of the sages as extended by him<sup>30</sup>.

## CLASSIFICATION OF MARMA

### Structural Classification (*Rachana Prakara*) Of Marma:

In this, the surgical tissue participating in the constitution of the *Marmas* has been highlighted considering the predominance of the tissue, which is responsible for common traumatic result.

**Table No.1- Classification of Marma according to *Rachana Prakara***

S.No.	Name of Marma	<i>Sushruta</i> <sup>31</sup>	<i>Ashtanga Sangraha</i>	<i>Ashtanga Hridaya</i>
1	<i>Mansa</i>	11	11	10
2	<i>Sira</i>	41	41	37
3	<i>Snayu</i>	27	27	23
4	<i>Asthi</i>	08	08	08
5	<i>Sandhi</i>	20	20	20
6	<i>Dhamani</i>	-	-	09

### *Parinama Prakara* (Prognostic Classification) Of Marma

The possible fate of any injury to *Marmasthanas* may be painful or fatal. *Sushruta* has classified this range into five headings according to post traumatic results<sup>32</sup>.

**Table No.2- Classification of Marma according to *Parinama Prakara***

S.No.	<i>Parinama Prakara Marma</i>	Total No.of Marma
1	<i>Sadhyah Pranahara Marma</i> (Instant fatal)	19
2	<i>Kalantara Pranahara Marma</i> (Delayed fatal)	33
3	<i>Vishalyaghna Marma</i> (Conditioned fatal)	3
4	<i>Vaikalyakara Marma</i> (Loss of function)	44
5	<i>Rujakara Marma</i> (Painful)	08
	Total	107

### *Marma* according to *Shadanga Sharira*<sup>33</sup> (Regional Classification):

**Table No.3- Classification of Marma according to *Shadanga Sharira***

S.No.	<i>Shadanga Sharira</i>	No.of Marma
1	<i>Shakha</i> (extremities) (11x4)	44
2	Trunk <i>Udara</i> (abdomen) <i>Uras</i> (Chest) <i>Pristha</i> (Back)	3 9 14
3	<i>Griva</i> and <i>Pratyurdhva</i> (Neck and above it head)	37
	Total	107

### *Dosha* predominance in *Marma*<sup>34</sup> :

**Table No.4- Classification of Marma according to *Dosha* predominance**

S.No.	<i>Parinama Prakara Marma</i>	Predominant <i>Dosha</i>
1	<i>Sadhyah Pranahara Marma</i> (Instant fatal)	<i>Agneya</i>
2	<i>Kalantara Pranahara Marma</i> (Delayed fatal)	<i>Saumya, Agneya</i>
3	<i>Vishalyaghna Marma</i> (Conditioned fatal)	<i>Vayavya</i>
4	<i>Vaikalyakara Marma</i> (Loss of function)	<i>Saumya</i>
5	<i>Rujakara Marma</i> (Painful)	<i>Saumya, Agneya, Vayavya</i>

## CONCLUSION

*Marma* is the prime concept of *Rachana Sharira* and this concept was explored firstly by *Acharya Charaka*. He explained the importance of 107 vital locations of the body where *Prana* resides. Out of them, 3 locations i.e. *Shira*, *Hridaya* and *Vasti* are located on the midline region of body. These 3 organs control the body in different manners. Later on *Acharya Sushruta* and other *Acharyas* explored and systematically described the regional and clinical anatomy of the 107 *Marmas*. In present scenario, these 107 *Marma* sites become the tools to treat and prevent the clinical and surgical conditions and complications. *Acharya Sushruta* also emphasized the fact that during the procedure of surgery it is very important to save the structures of these sites and preserve the *Prana*(consciousness) because these sites are the combination of structures i.e. *Mansa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*.

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