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**Ayurveda**

**MARMA SHARIRA MYTHS AND FACTS: A CONCEPTUAL REVIEW**

**KEY WORDS:**

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**ABSTRACT**

With the rapid mainstreaming of *Ayurveda* as a system of medicine many treatment modalities like *Panchkarma*, leech therapy, *Agnikarma*, *Kshara Sutra* etc. have come to be known and accepted worldwide not only by the public in general but also by the experts of modern medicine and sciences. One such therapy is *Marma Chikitsa* which is widely, practiced as an effective therapeutic procedure in various painful disease conditions like lumbar pain, radiating leg pain, Lumbago, Rheumatoid Arthritis, knee joint pain, Cervical Spondylosis, headache, etc. This involves manipulation of marma points by direct pressure or during massage, to provide relief in pain. The concept of application of vital points in the management of diseases, seem to have originated from *Varma Chikitsa* in *Siddha* system of medicine and also Accupressure or Accupuncture therapy of Chinese Medicine. However, in *Ayurvedic* classics *Marma* are described as specific points or organs in the body wherein even a minor injury may prove to be fatal and hence, the classical description of *Marma* is quite different from what is practiced these days. This article thus deals with the understanding of concept of *Marma* as described in classical texts and its application in the field of *Ayurveda*.

**INTRODUCTION :**

The word *Marma* and its application exist from Vedic period in India.<sup>[1]</sup> In *ayurvedic* classics it has been described as the complex anatomical structures in the body, the trauma to which leads to death of an individual or a permanent disability. The complexity of these structures lies in the fact that they are the conglomeration of *Mamsa* (flesh), *Sira* (veins), *Snayu* (ligaments), *Asthi* (bones) and *Sandhi* (joints).<sup>[2]</sup> Acharya Vagbhata has also enumerated *Dhamani Marma* however no other tissues or structures are said to be the composition of *Marma*.<sup>[3]</sup> These *Marma* points are also the special seat for *Chetana* (consciousness) and *Pranas* i.e. *Agni*, *Soma*, *Vayu*, *Satva*, *Rajas*, *Tamas*, *Panchindriya* And *Bhootatma*. Anatomically *marma* points are not just points of different dimensions but also several organs like *shirah* (head), *hridaya* (heart) *basti* (urinary bladder), *guda* (rectum) etc..<sup>[4]</sup>

*Sushruta samhita* is a *Shalya Pradhana Grantha* (Book of Surgery) which is why the description of *Marma* is detailed in this text. *Acharya Charaka* has mainly emphasized the importance of *shirah* (head), *hridaya* (heart) and *basti* (urinary bladder) while *Acharya Sushruta* has considered it's knowledge equal to half of the knowledge of *Shalya Tantra*.<sup>[5][6]</sup> While performing a surgery these *Marma* structures must be kept in mind in order to avoid injury or trauma to these structures which may lead to death or disability.

In the branch of *Panchkarma* these *marma* points must be kept in mind while subjecting the body parts to high temperatures or high pressure during *Abhyanga* (oil massage), *Mardana* etc.

Stimulation or manipulation of *Marma* points for the management of various diseases mainly painful conditions is a new concept which is widely used by various *ayurvedic* practitioners. It has been claimed to provide an instant relief in various painful conditions like *LBA*, *spondylopathies*, *osteoarthritis* etc..<sup>[7]</sup> However very limited documentation is available to evaluate the efficacy of *marma* therapy in these disease conditions. The concept of *Marma* is often correlated with that of *Shad Chakras*, vital energy points in *acupressure* and *acupuncture* and *Varman* in *Siddha* system of medicine but anatomical and physiological description of *marma* does not coincide with that of any of these. Also no source of

information is available on the mode of action of *marma* therapy and how this originated as a treatment modality. The concept of applying pressure over *marma* points also contradicts *ayurvedic* concept where *peedana* (pressure application that causes pain) on *marma* points is contraindicated.<sup>[8]</sup> In this article it is attempted to understand the concept of *marma sharira* and its application in the field of *ayurveda*. It also emphasize on various myths regarding *marma sharira* that prevail nowadays.

**1. HISTORICAL BACKGROUND**

The knowledge of *Marma* seems to exist from Vedic times. The references of words like *varman* and *drapi* meaning some kind of body armor to protect the body from enemy weapons are found in *Rigveda* while use of words like *Kavacha* or breast plate is found in *Atharva veda*. The references for protective clothing for soldiers along with elephants and horses are found in *Mahabharata* also.<sup>[9]</sup>

*Marma sharira* in *Ayurvedic* classics has been described in detail. Different schools of *Ayurveda* have analyzed the same from different angles. While *Acharya Charaka* have emphasized the importance of *Trimarma* i.e. *shirah*, *bridaya* and *basti*, *Acharya Sushruta* has regarded the knowledge of *Marma* as half of that of *Shalya Tantra*.<sup>[10]</sup> However, references of *Marma Chikitsa* are not found in classical texts of *Ayurveda*. Its description in *Vedas* and *mythology* also is mainly restricted to martial arts.

**2. ANATOMY AND PHYSIOLOGY OF MARMA**

According to *ayurvedic* texts *marma* is a complex amalgamation of various *Dhatus* and *Updhatus* such as i.e. *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*. Although all of the *Marma* points comprise of all five, the predominance of the tissue determines its classification as *Mamsa Marma*, *Sira Marma* etc. *Acharya Dalhana* in his commentary has clearly mentioned that no other tissue or structure is involved in the composition of *marma* not even *srotasa*. He had justified it by the fact that not all injuries to *srotasa* lead to fatality. Also *Srotasa* are the channels wherein the transformation of tissues takes place. So anatomically and physiologically they are entirely different structures.<sup>[11]</sup> This refutes one of the arguments in favor of *masrma* therapy that it removes *srotorodha* (obstruction in *srotasa*).

The Marma points are also considered as special seat for prana namely, *Agni, soma, vayu, satva, raja, tamas, panchendriya* and *atma*. This is one of the reasons why trauma to these points turns out to be fatal.<sup>[12]</sup> Acharya Charaka has clearly mentioned that these *marma* points are special seat for *Chetana* which is the reason why an injury on *marma* point will cause more drastic effect than the similar injury on some non *marma* areas.<sup>[13]</sup> The pain on these points on application of pressure will be more as compared to non *marma* points. He has also clearly mentioned that *Peedana* on *marma* may lead to serious vitiation of *vata dosha* and results in fatality.<sup>[14]</sup> This brings another argument against Marma therapy that how if application of pressure even in low intensity is prohibited on *marma* areas, it can be used for the management of the disease.

### 3. IMPORTANCE OF MARMAM IN AYURVEDA

*Marma* in classical texts is not described as the type of treatment. The knowledge of *marma* deals more with prognosis of the disease and anatomy of the body. Its knowledge is essential for the following reasons.

#### 4.1. PROGNOSTIC EVALUATION OF A DISEASE OR AN INJURY

While describing the features of curable and non curable diseases *Acharyas* have clearly mentioned that if a *marma* is afflicted with *dosha*, it is either difficult to treat or unmanageable.<sup>[15]</sup> Acharya Charaka has also mentioned *Marmaghata* as one of the causative factors for *Vatavyadhi*.<sup>[16]</sup> Hence, evaluation of a disease or an injury is must while planning out its line of management. Acharya Charaka has mentioned *Basti* as an effective treatment in *Marmaghata*.<sup>[17]</sup>

#### 4.2. IN THE FIELD OF SURGERY

While performing a surgery these *marma* points must be kept in mind in order to avoid injury or trauma to these structures which may lead to death or disability. The death may occur due to excessive bleeding, shock, severe pain etc.<sup>[18]</sup> This is the reason why Acharya Sushruta has given detailed description of *marma* and also considered its knowledge as half of that of *shalya tantra*. An entire chapter is dedicated to *Marma Sharira* in *Sharirasthana* of *Sushruta Samhita* and *Astang Hridaya*. Due to the same reason during the wars in older times, breast pieces, helmets etc. were used to protect these structures. Even in modern times, gloves, protective cups, caps are worn by sportsman to avoid injury over vital structures. Hence, a surgeon must have a detailed knowledge of *marma* to avoid grave outcomes during a surgical process.

#### 4.3. IN THE FIELD OF PANCHKARMA

Although Acharya Charaka has given more importance to *Trimarma* i.e. *shirah, hridaya* and *basti*, while performing a *Panchkarma* procedure knowledge of *shakagata marma* too is essential. Hence, a *Panchkarma* practitioner must have a sound knowledge of *marma* mainly because;

- While performing *abhyanga, mardana* etc, the amount of pressure to be applied must be kept in mind while dealing with *marma* points. Strong pressure and *mardana* with feet must be avoided.<sup>[19]</sup>
- Dahana karma* and subjection to extreme temperature has been contraindicated on *marma* points. Also Acharya Charaka has indicated *mridu swedana* (mild sudation) for *hridaya* with proper protective measures.<sup>[20]</sup>
- While performing *basti* care must be taken to avoid injury to rectum and bladder in case of *Pakwashayagata* and *Uttarbasti* respectively.

### 5. ACCUPUNCTURE VS MARMA

Acupuncture therapy is a part of Chinese medicine wherein various disease conditions are treated by the insertion of dry needles at specific locations in the body. Acupressure is similar in principle to acupuncture wherein instead of puncturing a pressure of varying degree is applied on various body parts to treat the disease. The goal of acupuncture is to

correct imbalances of flow and restore health through stimulation, generally by inserting needles through the skin at points along the meridians of the body. Current acupuncture information lists up to 400 different acupuncture points for various health problems.<sup>[21]</sup> Some medical studies have suggested that acupressure may be effective at helping manage nausea and vomiting, for helping lower back pain, tension headaches, stomach ache, among other things, although such studies have been found to have a high likelihood of bias.<sup>[22]</sup>

A 2011 systematic review of acupressure's effectiveness at treating symptoms found that 35 out of 43 randomized controlled trials had concluded that acupressure was effective at treating certain symptoms; however, the nature of these 43 studies "indicated a significant likelihood of bias."<sup>[23]</sup> A 2011 Cochrane review of four trials using acupuncture and nine studies using acupressure to control pain in childbirth concluded that "acupuncture or acupressure may help relieve pain during labor, but more research is needed"<sup>[24]</sup>.

In 'A Review of the Evidence for the Effectiveness, Safety, and Cost of Acupuncture, Massage Therapy, and Spinal Manipulation for Back Pain', it was concluded that massage is an effective treatment for persistent back pain. Spinal manipulation has small clinical benefits that are equivalent to those of other commonly used therapies. The effectiveness of acupuncture remains unclear.<sup>[25]</sup>

The principle behind acupuncture or acupressure therapy does not match with the classical description of *marma*. There is again the difference between the number and site of acupressure and *marma* points. It cannot be concluded that these *marma* points correspond to the acupressure points used for various pain relieving therapies. Hence, the reliability of *marma* therapy is still uncertain.

### 6. MECHANISM OF PAIN SUPPRESSION BY TACTILE STIMULATION

There are two prime mechanisms by which tactile stimulation by the means of *abhyanga* (massage), acupuncture or acupressure, *marma* therapy etc. cause pain suppression. These include-

#### 6.1. PSYCHOGENIC EXCITATION OF CENTRAL ANAL GESIA SYSTEM

Electrical stimulation either in the periaqueductal grey area or raphe nucleus in addition to higher centers that stimulate these areas can suppress many strong pain signals entering through dorsal spinal roots. Several opiate like substances found at the various levels of nervous system too are responsible for pain suppression. These substances include beta-endorphin, met-enkephalin, leu enkephalin etc.<sup>[26]</sup> The stimulation of these areas through *abhyanga* and other forms of tactile stimulation is often psychogenic through relaxation of mind hence, there seem to be no need for pressure application on *marma* points that might lead to complications.

#### 6.2. GATE CONTROL THEORY OF PAIN

The probable explanation of the pain relieving effect upon applying pressure on several vital points can be explained with GATE theory of pain. According to this theory the large fibers that carry the sensations of touch, pressure or vibrations tend to inhibit the stimulation of pain through thin pain fibers, thus helping in pain suppression. Though this theory is merely a hypothesis explaining the pain relieving effect of liniments, massage, acupuncture etc, it is widely accepted till date.<sup>[27]</sup>

However, even if GATE control theory explains the pain relieving effect of *marma* therapy, it cannot be taken as a substantial evidence for efficacy of *marma* therapy mainly because-

- It does not explain the management of non painful

conditions like nausea, vomiting and tremors.

- Any point on body having mechanoreceptors, thermoreceptors, nociceptors can be manipulated for pain management then why marma points which are already sensitive and may cause complications. The site of pain should be preferred for tactile stimulation for pain suppression while marma points may or may not be in the vicinity of the painful area.
- There is a lack of evidence based data to suggest the efficacy of marma therapy along with no classical reference.

## 7. CONCLUSION

Lack of classical references, proper pre-clinical, clinical studies and evidence based data on marma therapy along with no probable mechanism of action accounts for controversies regarding marma therapy. Although evidence based data is available for acupuncture and allied therapies, it cannot be correlated with marma in ayurveda since their description is entirely different. In addition, no specific procedures or protocols are established and validated till date. The concept of marma is one of the greatest contributions of ayurveda in health sciences if it is applied in accordance with the knowledge of ayurvedic classics. A great deal of research work is required to unfold the mystery known as Marma Science.

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