

Review article

MARMA: A VALUABLE HIDDEN TREASURE OF AYURVEDA AND ITS MEDICO-SURGICAL IMPORTANCE IN PRESENT ERA

Sandeep Madhukar Lahange^{1*}, Archana Nivrutti Bhangare², Vikash Bhatnagar¹ and Shailza Bhatnagar³

¹Department of Sharir Rachana, National Institute of Ayurveda, Jaipur 302002, India

²Department of Kayachikitsa, Mahatma Jyotiba Fule Ayurved College & Hospital, Chomu, Jaipur, India

³Department of Maulik Siddhant, National Institute of Ayurveda, Jaipur 302002, India

* Corresponding author. Email: sandiplahange@gmail.com

Abstract

The ingenuity of ancient India is still relevant as they not only gave the vision of happy social and personal life, with a great sense of ecological balance but they also discovered many scientific facts and truth about the human body. Such discoveries formed the basis of many sciences of the present era. In this perspective, we will discuss the medico-surgical importance marma which was described in a very scientific manner by the seers of *Ayurveda*. The term *Atmas swaroopa* is coined for *Prana* due to its existence all over the body, but still, its roots being embedded in the precise location of the human structure. The point of union of five basic human structures that is *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi* is one such unique location explained in classics where this vital life force energy is residing¹. In other words, they can be defined as the complex anatomical sites, where definite physiology rests and produce specific traumatic effects. These specific locations are explained as the concept of *Marma Sharir* in *Ayurvedic samhitas*. The concept of *Marma* is extremely extensive research for every ayurvedic clinician. It is useful in various types of trauma due to different factors of the body as well incidents occurring during various surgeries, removal of varied types of foreign bodies from different areas of the body, warfare wounds, attacks of wild animals during those days and also the various troubles of *Panchakarma* therapy. The clinical aspect of *Marma* is elaborated by *Sushruta* was to avoid damage or injury to the important structure during surgery. *Acharya Charaka* explains the concept of *TriMarma* while considering the origin and practical utility of *Marma*. It provides great importance to the three *Marma* namely *Shir*, *Hridaya* and *Basti* out of 107 *Marma* and for that reason contained in the ten *Pranayatana*. The knowledge of *Marma* is of more useful during Surgery, because of the fact that injury to the *Marma* point, may lead to loss of life immediately or later by problems or result in deformity of a specific area of the body. The surgeon must know the dimension of every *Marma* and the harms of the *Marma* point injury so that he can make incision carefully while during any surgical condition to avoid any medical emergency.

Keywords: Marma, Acharya Charaka, Sandhi

Introduction

References of *Marma* are found since *Vedic* literature. *Valmiki Ramayana* and *Mahabharata* also described the *Marma*. In *Ayurveda*, *Marma* was first documented by *Acharya Charak*. The detailed description of *Marma Sharir* is available in *Samhitas*. *Acharya Sushruta* stated every aspect of *Marma* like definition, signs and symptoms of *Marma* injury. The total numbers of *Marma* as described in *Samhitas* are 107 in number. Twelve *Pranas*, the vital energy of the body, are the contents of the *Marma sthana*. As *Marma* are vital points of the body they should be protected from any

injury. *Acharya Sushruta* believes that *Marma Sharir* covers half knowledge of surgery. Any injury to these points may result in death and physician expert in *Marma* therapy, the patient will cause some deformity. *Marma* is also sites of *Tridosha* and *Triguna*. Hence, these are specific areas of the body which is directly related to *Pranik* channels to internal organs. *Acharya Sushruta* explains the *Marmavidha Lakshanas* in detail, for example- injury to *Lohitaksha Marma*, there will death due to excessive bleeding; trauma to *Kshipra Marma* will result in seizures. The development of modern science has helped us to understand the services available in biological cell whenever called for. This

specific phenomenon has been observed and studied by different *Ayurvedic* schools of thoughts by highlighting the importance of *Marma sthanas* constituted by five important surgical tissues, *Mamsa, Sira, Snayu, Asthi* and *Sandhi*. Those biological emergency services are to be cared for during the need of hours. The development of modern science has helped us to understand the services available in biological cell whenever called for. This specific phenomenon has been observed and studied by different *Ayurvedic* schools of thoughts by highlighting the importance of *Marma sthanas* constituted by five important surgical tissues, *Mamsa, Sira, Snayu, Asthi, Sandhi*. Those biological emergency services are to be cared for during the need of hours. The severity of Marma has been evaluated as above where post-trauma commonly gives healing results. But this school has already emphasizes regarding the alteration of the post-traumatic result depending upon the severity irrespective of the site.

In ancient time the war was a common situation of the people and the kings, clinicians and surgeons were especially engaged with the associations of the army of the kings, as being the custodians of the health of the warriors. Injuries inflicting because of the use of the various types of weapons in the battlefield i.e. sword, arrow, *Gada*, etc. were belonging to the cut, puncture or blunt injuries involving various types of the structures in the body like arteries, muscles, nerves, bones and the visceral organs in general and when in combination specifying *Marma*. *Marma* is the meeting points of five structures. *Ayurveda* described various superficially and deeply situated sites of the human body such as; *Sirā, asthi, mamsa, snāyu, sandhi* which are called vital points of the body. These special sites make various points which are termed as *Marma* (vital points). *Sushruta* has referred 107 anatomical points as *Marmas* in the human body. If any injury or damage happens to these vital points due to any reasons, it may be very harmful. That may cause death or any deformity in the body. He presented all the *Marmas* particularly on the basis of injury results. He has specially presented *Sadyapranahara, Kalantara-pranahara, Vaikalyakara, Vishalyaghna* and *Rujakara Marmas* categorically. This shows that school of *Sushruta* has also weighed the importance of the intensity of the injury e.g. the injury inflicted for the purpose of destruction may cause high profile post-traumatic result from low profile Marma whereas the injury inflicted for the purpose of healing the wound cause low profile post-traumatic result from high profile Marma. Does this raise the query that under present advancement of the surgery any kind of *Marma* and subsequent predominant anatomical structure is

manageable? *Sushruta* has already answered the query by the observation mentioned in the classical books. It also shows the awareness of the future development of the surgery which may possibly concern the prognostic status of different *Marma* mentioned in ancient period. Conclusively it may be said that intensity of trauma may alter the prognostic state of *Marma*. However, a skilled surgeon may save the patient from disaster. The importance of surgical tissue has been laid down with respect to the mode of injury, its dimensions and the kind of weapon used, this also shows that classical view is not conservative on the prognostic status of any *Marma* and prospective development of weaponry was anticipated. *Sushruta* has also considered in the Traumatology the importance of management given to the patient, which is confirmed by war experiences. Despite the discoveries since the period of *Sushruta* organized care of the acute injured is a comparatively recent innovation.

Discussion

During the early years of war, conservative treatment of wounds was universal. Tetanus, gas, Tetanus, gas gangrene and the hemolytic streptococcus took their toll without hindrance. The excision of the tissue lying in the track of the wound became an established principle. In the early 20th century, there was newly awakened interest in the possible role of capillary contraction and probability in the aetiology of shock. The classical views of *Ayurveda* have already drawn the attention of microcirculation responsible for maintaining life but nothing could be advanced since then due to the dark period of *Ayurveda*. As result of advancement which enhanced the skill of *Vaidya* (doctor) the mortality rate dropped markedly to 4.5% in World War II which has already been mentioned in classical note of *Sushruta* that skilled *Vaidya* can save the trauma person inflicted at *Marma sthana* but not before the cost of residual loss Mortality and morbidity were both shown to improve if patients with serious wounds were evacuated within ten days after wounding. This shows the first week is considered to be very important from the mortality point of view and such vital areas were isolated by *Sushruta* under the category of *Sadya Pranahar Marma* where skilled management and rapid intervention are desired.

This may be observed from *Sushruta's* version, that vessels are important from a trauma point of view and usually cause fatal result due to haemorrhage and shock. The specific training for multiple injuries is not commonly appreciated outside military practices and

large trauma centres. This is unfortunate because the immediate return of intelligent purposeful is greater than the early care of the severely injured. The patient is based on management when overall responsibility rests on one physician division of responsibility rests on one physician division of responsibility any attention only to the particular area in which the physician has special knowledge may decrease awareness of complication and will hinder the evolution of the patient's overall problems. Early care of the wound is of paramount importance not only this but the physician looking after the wounds should have full knowledge of acute derangement of the body. In many instances, the margin between survival and death is so narrow that priority has to be established for every patient admitted to the emergency.

The prognosis of *Marma* is variable depending upon the intensity, the type of weapon used, the depth of the wound and the loss of the type of tissue. It has also been observed by our *Acharyas* that the time limit of fatality of *Sadhya pranahara Marma* is seven days, *Kalantara Pranahara Marma* is from 15th that to a month. The concept of modern surgery is also almost the same. The extremities are frequently involved in war and civil wounds, but morbidity of tissue in the extremities is comparatively not very much significant as compared to the tissue involved in head, neck and trunk. The vessels are especially more significant than other systems and organs. The muscles are made up of a stripped (smooth muscle) supplied by the sympathetic nervous system. The injury to the vessels, particularly arteries leads to hypertonicity by sympathetic influx which causes recoil of muscles within the lumen of the arteries. Thus there is a self-arrest of bleeding. The life, therefore, is protected at the cost of a limb. The unmanageable damage of other tissue of extremities indicates amputation of the limb but saves the life. This observation is clearly mentioned by *Acharya Sushruta*. Thus, in *Ayurvedic* classics, *Marma* is illustrated as the vital point in the human body, the injury of which leads to severe pain or may be termination of life. Presents life is very fast and furious causes so many injuries during accidents, sports, and maybe during daily activities which lead into severe pain, injuries, deformity or even death. To overcome these circumstances we must know the vital parts of our body so that we take proper care to secure them from injuries. *Marma* plays a very important role in making sports guards, pads, helmets, and other accessories to use in sports to avoid injuries. It is also helpful while during any surgical procedure by avoiding injury to the adjacent vital point. Every individual must know about

the vital parts of our body so that they prevent them from any type of injury. In modern surgery, the incisions are used taking into consideration the nerve and blood circulation. Although there is no direct reference of *Marma Sharir* in modern surgery, even today every surgical attempt is made to avoid injury to the essential and dangerous structures or areas of the body; otherwise many problems occur in the present era. So it is important to never have only the structural knowledge or morphological information on the *Marma* factors but the understanding of minute information on gross and microscopic anatomy are also necessary to become a good surgeon.

Conclusion

In this era of development, the topic *Marma* requires special attention. The logic behind these descriptions of *Marma Sharir* is needed to be understood medico-surgical importance. *Acharya Charaka* has mentioned the importance of *Trimarma* (*Hridaya*, *Basti* and *Nabhi*). It shows that *Ayurveda* knew that these are important and delicate viscera of body and if an injury happens to these organs that will definitely lead to trivial diseases and deformity or even death. Therefore knowledge of these *Marma* is very essential for physicians and surgeons. The knowledge of *Marma* is dependent on clinical experience. If *Marma Sharira* is explored further there would be the likelihood of more success in treatment methods and surgery aside from Traumatology. In day to day life, the knowledge of *Marma* is seen in the other fields like sports ex. in cricket wearing abdomen guards, thigh pads, leg pads, hand gloves, helmets etc to protect the *Marma* or vital points like *Janu*, *Indrabasti*, *Gulpha* etc. So like these the ages-old *Marma* can be utilized and accepted as an applied aspect of Anatomy in medico-surgical measures.

References

- [1]. Sushrut samhita, Yadavji Trikamji Acharya, editor. Susruta Samhita with Nibandha Sangraha of Dalhanacharya. 8th ed. Varanasi: Chaukhambha Orientalia, 2008. p. 369.
- [2]. Ashtanga hrudaya, Harisadasivasastri Paradakara Bhisagacarya, editor. Ashtanga Hrudayam with Sarvangasundara of Arunadatta & Ayurvedarasayana of Hemadri. Varanasi: Chaukhambha Orientalia; 2005.
- [3]. Charaka Samhita revised by Caraka and Drdhabala with Sri Cakrapanidatta

- Ayurvedadipika Commentary in Sanskrit by Vaidya Jadavji Trikamji Acharya, editor. 5th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2008.
- [4]. Sushrut Samhita, Vaidya Atridev, Motilal Banarasidas New Delhi, 2002; p. 324.
- [5]. Sushrut samhita, Sushrutvimarshanitika, volume II, dr. anantram Sharma, chaukhamba surbharati prakashan, 2004; p. 99.
- [6]. Charaka Samhita revised by Caraka and Drdhabala with Sri Cakrapanidatta Ayurveda-dipika Commentary in Sanskrit by Vaidya Jadavji Trikamji Acharya (Ed.) 5th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2008.
- [7]. Sushrut Samhita, Vimarshani Tika, Volume II, Dr. Anantram Sharma, Chaukhamba Surbharati Prakashan, 2004; p. 99
- [8]. Sushrut samhita, Yadavji Trikamji Acharya, editor. Susruta Samhita with Nibandha Sangraha of Dalhanacharya. 8th ed. Varanasi: Chaukhambha Orientalia, 2008.
- [9]. Ashtanga hrudaya, Harisadasivasastri Paradakara Bhisagacarya, editor. Ashtanga Hrudayam with Sarvangasundara of Arunadatta & Ayurveda-rasayana of Hemadri. Varanasi: Chaukhambha Orientalia; 2005.
- [10]. Chaurasia.B.D. editor. Human Anatomy, part I. 4th ed. New Delhi: BSP publishers & Distributors; 2004.
- [11]. Harsh Arvind Pastore, Anatomical Consideration of Trimarma. World Journal of Pharmaceutical Research, 4(9): 700-704.
- [12]. Das S., editor. A Concise Textbook of Surgery, 3rd ed. Calcutta: 2001.
- [13]. Chaurasia.B.D., editor. Human Anatomy, part I. 4th ed. New Delhi: CBS Publishers & Distributors; 2004.
- [14]. Ankur Kumar Tanwar, Importance of Ayurvedic Marma Vigyan, Ankur Kumar Tanwar published in Ayurveda - for healthy living monthly magazine October 23, 2015, Govt of NCT Delhi.
- [15]. Vijaynath.V, A Comprehensive Study of Marma in the Hasta (Hand) with special reference to the Surface and Regional Anatomy, S. D. M. College Of Ayurveda, Udupi, Year 2010 -11.
- [16]. Keith, Moore & Arthur. F. Dalley, editor. Clinically Oriented Anatomy, 5th ed. Baltimore: Lippincott Williams & Wilkins; 2006, p. 1209.

Article received on March 03, 2019; Accepted on March 17, 2019

© Author(s) and Ayush Darpan Journal. All rights reserved.