

Consideration of Marma Shareer in Modern Era w.s.r to Traumatology

ABSTRACT:

Ayurveda the science of life is traced back to *Vedic* time about 5000 B.C. Ancient medicine is the mother of sciences and played a great role in the integration of early culture. *Marma* is one of the important subjects of *Ayurveda*. *Marma* (Vital Parts) of body have the great surgical importance as they are considered as anatomical land mark of body. Explanation of *Marma* in *Sushrut Samhita* is the evidence of first ever description of Surgical and applied anatomy in medical science. Different school of thoughts analysed this subject from different angles and developed their own thought. But this subject *Marma* appears to be relevant even today with reference to assessment of clinical health. *Marma Vigyan* can be taken as a synonym of Traumatology. In the present study a deep insight into *Marma Shareer* has been done that was almost found to have earmarks of Traumatology being discussed in the contemporary sciences in the present era. Trauma is a leading cause of death during the seventh decades of life.

Keywords: *Marma shareer, Ayurveda, Traumatology.*

INTRODUCTION:

The word *Marma* and its application exist from the *Vedic* period in India. No medical history is as old as two countries namely India and China. China is known for acupuncture and pedestrian doctors. *Veda* unfolds the mystery of primitive man (Max Muller); this is the first documentation compiled by Aryans about more than 5000 years ago. The word *Marma* dates back to this period ^[1], which is considered to be the oldest one among *Vedas* where several plants and health cares have been described.

Marma Vigyan may be taken as a synonym of traumatology. The history of trauma can be anticipated from the date survival is the fittest-exists. In India the trauma and its management is reported from the *Vedic* period where in ancient wars, surgeons had frequently, to attend the Aryans chief and soldiers. In *Rigaveda* the reference of amputated legs and its rehabilitation by substitutes may be traced. Injured eyes were enucleated, and arrow shaped objects were extracted from the limbs of the Aryan soldiers ^[2]. The surgical experience of the ancient age has been compiled systematically in *Sushruta Samhita*, which is the first documentation of its kind. *Marma* is formed by the union of five importance element of body as *Mamsa, Sira, Snayu, Asthi* and *Sandhi* ^[3]. If we observe these five elements in modern science they form major part of body in the form of muscles, veins, ligaments, bones and joints. Thus, any damage to such a vital part leads to death or structural, functional at impairment.

Trauma injury is the leading cause of mortality and hospitalization worldwide and the leading cause of potential years of productive life lost. Patients with multiple injuries are prevalent, increasing the complexity of trauma care and treatment. Better understanding of the nature of trauma risk and outcome could lead to more effective

prevention and treatment strategies. Trauma injury accounts for 9% of global mortality and are a threat to health worldwide^[4].

MARMA IN SAMHITAS:

Charaka Samhita

Charaka is the first documentation which has mentioned *Marma* in *Samhita* and emphasised on the *Marma Vigyan*. *Charaka* cited important consequential *Marma* from physician point of view but acknowledged total number of 107 *Marmas* in the body. He devoted in his treatise two chapters on *Trimarma* (tripod of life)^[5] or more important being life threatening organs of the body, *Hridaya*(heart), *Murdha*(head) and *Vasti*(urinary bladder). The concept of *Trimarma* and the importance given by *Acharya Charaka* may be even analysed today. The forensic medicine recognises *Trimarma* as tripod of life i.e. heart, brain and lungs. The fatal conditions are also produced by these organs namely cardiac arrest, syncope and asphyxia respectively but *Charaka* has mentioned *Hridaya*, *Basti* and *Shira*. Modern medicine has mentioned three modes of death caused by different three organs and therefore they have been labelled as tripod of life. *Shira* may be interpreted by brain, *Hridya* may be heart but lungs are missing in *Trimarma* and have been replaced by *Vasti* because heart and lungs have hand and glove relationship.

Sushruta Samhita

The detailed description has been made available by *Sushruta* and the traumatology appears to be emphasised from that period if the history of Indian medical literature is followed. *Sushruta* has referred prohibition of surgical manoeuvring such as *Kshara Karma*, *Agni Karma* and *Shastra* on *Marmas*. This school has also approved the observations of *Garbhonishad* and *Charaka* regarding total number of *Marmas*. The traumatology of these periods was restricted to arrows but today this scenario has completely changed. Therefore, there is need to review *Marma* in reference to present status. *Sushruta* believes that *Marma Shareer* covers half of the knowledge of surgery^[6]. This observation may be evaluated today; the present surgery too may be classified under two heads the planned (*Nija Shalya*) and unplanned surgery (*Agantuja shalya*)^[7]. Planned surgery gives an opportunity to a surgeon to proceed with the classical description of different steps of surgery, whereas unplanned surgery does not provide any opportunity to follow those classical steps. This states the obvious difference between two. The art of healing according to above two objects are entirely different though the object is same therefore there are two different skilled persons needed for the purpose; probably this was the reason that *Sushruta* believes *Marma Vigyan* as half of the knowledge of surgery. According to *Sushruta Marma* is constituted by confluence of *Mamsa*(muscle), *Sira*(vessels), *Snayu* (nerves, tendons and ligaments), *Asthi*(bone) and *Sandhi*(joints)^[8] where life rests generally, but the word '*Visheshana*' signifies the importance of the place where all five living surgical tissues are underlying the place. Surgery is involved in only five tissues where care is mandatory. The doctrine of surgery even today encircles round this five tissues and thus plays vital role in prognosis of the wounds. The possible fate of any wound may be pain to fatal end. *Acharya Sushruta* has classified this range into several heads according to post traumatic results.

Table no.1^[9]

<i>Parinama Prakara marma</i>	Total no.of Marma
<i>Sadhya Pranahara Marma</i> (instant fatal)	19

<i>Kalantara Pranahara Marma</i> (delayed fatal)	33
<i>Vishlyaghana Marma</i> (conditional fatal)	3
<i>Vaikalyakara Marma</i> (loss of function)	44
<i>Rujakara Marma</i> (painful)	08
Total	107

DISCUSSION:

The trauma gears up almost all the vital systems to be ready for auto-regulation of homeostasis when pressed in emergency. The development of modern medical 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 Asthals* constituted by five important surgical tissues-*Mamsa, Sira, Snayu, Asthi and Sandhi*. These biological emergency services are to be pressed in or to be cared for during the need of the hours.

Sadya Pranahara Marma:

If we thoroughly analyse the symptomatology of shock, we would find the symptoms similar as described by *Sushruta* in *Sadya Pranahara Marma*. The symptom asphyxia is related to *Marma* present in chest region such as *Hridya, Stanmoola, Aplapa* etc of which *Hridaya* is directly related to primary asphyxia which is quickly fatal. The second symptom is that of hemorrhagic which *Sushruta* has viewed in most of *Sira Marma* of *Sadya Pranahara Marma*. Haemorrhage should be dealt in immediately otherwise results in an emergency shock.

The current definition of shock is inadequate blood flow to vital organs or the inability of the tissues of these organs to utilise oxygen and other nutrients. The trauma is closely associated with the shock. The neurogenic shock is produced due to reversible pathway created in the nervous system, ultimately giving rise to transient unconsciousness but as soon as peripheral vascular system is involved the person involved in injuries enters the secondary shock. This condition is usually irreversible which is alarming and needs care. The trauma and haemorrhage have hand and glove relation and is important from secondary shock point of view. The hypovolemia due to haemorrhage compels the vessels to starve from the blood resulting into ischemia. At the end of 19th century surgeons recognised shock where as *Sushruta* has already explained the symptomatology of shock while describing *Sadya Pranahara Marma*^[10]. The life science of *Ayurveda* has clarified these aspects with the help of *Vata, Pitta* and *Kapha*. The utilization of oxygen (*Vata*) and nutrients (*Kapha*) depends upon the normal function of *Pitta*, which is responsible for biotransformation. *Pranavayu* is the foremost and essential ingredient of living subject. Recovery from shock depends upon the functional status of *Tridosha* rapidly returning to normal. Trauma comes under *Agantuja Vyadhi* where sudden and uncalled *Vayu* comes into action to de-arrange the nutritional status of the tissue due to disorganised *Pitta* which is responsible for metabolism of nutritional substances. The sheet anchor disturbing element and initiator of the disorganization is *Vata*.

Kalantara Pranahara Marma:

The post traumatic result in *Kalantara Pranahara Marma* is due to considerable loss of tissue and severe pain. The post traumatic patient also observes shift in energy source from a mix exogenous diet to endogenous fat oxidation. *Sushruta* has also contended about *Dhatukshaya* under these circumstances^[11] although body

glycogen supplies some carbohydrate energy in the first few hours after injury, and the mobilisation of muscle protein provides some energy by the ultimate oxidation of its carbon moieties, it is fat that provides most of the patient's energy requirement during a period of zero or negligible food intake.

Vishlyaghna Marma:

The *Vishlyaghana Marma* is a special surgical condition which has been observed by *Sushruta*. The importance of this *Marma* is due to the bony anatomy of this region which during the trauma, fractured bones behaves like haemostat, but immediate removal may produce severe haemorrhage, shock and death whereas delayed surgical intervention giving an opportunity to resolution of injured vessels and later surgical removal of the foreign body saves the life.

Vaikalyakara Marma

The post traumatic effect of *Vaikalyakara Marma* is commonly resolved into division of the anatomical structure which is one of the surgical tissues of *Sushruta* amounting to permanent loss of function.

Rujakara Marma

The story of *Marma* and its management rounds around the tissue injury and its response. Whenever the physiology and anatomy of any tissue tend to be altered it resists and reacts to physics, this rule is known as the law of inertia i.e. any substance resists any alteration to its present status. Pain (*ruja*) is the first sign of morbidity of any tissue this phenomenon has already been observed in Indian classic by *Acharya Sushruta*. This is the cry of tissue for want of oxygen giving rise to changes in polarity. According to *Sushruta* followers there are certain places in the body where normally the loss of tissue is not amounting to functional loss that further means its anatomy is not so much altered that the function of the tissue suffers. However, the microanatomy of the structure is changed affecting the physiology of the tissue but not amounting to functional observation.

CONCLUSION:

From the present study it was concluded that the valuable concepts given by our *Acharyas* are eternal, factual and undeniable since time immemorial for the time being. In this study an effort has been made to extract out the facts of subject of traumatology of contemporary sciences whose roots are hidden in our divine *Ayurveda* science in the form of *Marma Sharir* as in today's era it is a drawback of our science that when it is weighed in a balance beam with contemporary sciences, the latter outweighs our mother science due to the development of evidenced based significant parameters and techniques which draws the attention of students of *Ayurveda* towards itself and causes a great loss in the lineage of *Ayurvedic* fraternity as it is a famous quote that "if something beckons, it is so attractive that you want to become involved in it".

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