Comprehend of Patho-physiological Changes & Consequential Prognosis in *Marmabhighata* (Injury to *Marma*)

Hiarman Banjare^{1*}, Susil Meher², Sachin kumar Baghel³, Sujit Dalai⁴

¹Mahaveer College of Ayurvedic Science, Rajnandgaon, Chhatishgarh

²Govt. Ayurved College, Balangir, Odisha

³Govt Ayurvedic College, Bilaspur, Chhatishgarh

⁴Bharati Ayurved Medical College & Hospital, Durg, Chhatishgarh

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Abstract- ‘*Marma*’ literary communicates the sense of vital parts of the body. The science of *Marma* is an unique approach of *Ayurveda* and established to help the practice of surgery. There are total 107 *Marma*’s in the human body. These are classified into five types according to location, structures involved, effect and consequences or prognosis of the trauma over there. Any type of *Marmabhighata* (injury to *Marma*) is likely to produce subjective manifestations governed by the extent and the nature of injuries to the *Marmas*. *Tridosha* in the body have their *Panchabhautik* origin. The *Pancha mahabhautas* are the main constituting component of *Tridosha* such that, the consequence of traumatised *Marma* has got direct bearing on the predominance of *Tridoshas* over there. Any trauma to these *Marmas* is likely to provoke both the *Shareerik* and *Manasik dosha* which thereby affects the body (*Sharira*) and Mind (*Mana*). So, as the base (body and Mind) gets affected, the *Jeevatma* or *Bhootatma* itself ceases to exit. This changes in *Marma* after injury such as deformities and delayed healing mainly depends upon the consequences that occur due to patho-physiological changes over *Marma*.

Keyword: *Marma*, *Marmabhighata*, injury to *Marma*, *Tridosha*, *Panchabhuta*, *Consequences*

I. INTRODUCTION

“*Marma Sharira*” a science of vital anatomical sites with higher life value, has been established to help the practice of surgery in *Ayurveda*. *Sushruta* ‘the father of surgery’ has signified this science by equating it, as ‘half of the knowledge of surgery[1]. He has elaborated that there are 107 such anatomical sites/points (vulnerable) lies in the body[2,3] which need special attention of the clinicians during practice. This vital point of the body is having very technical and practical utilization from traumatic attack and diagnosis of various diseases.

The term ‘*Marma*’ literary communicates the sense of vital parts of the body. Any injuries or mechanical involvement directly affecting the sites of *Mamas* are likely to take away the life. Knowledge pertaining the structure and location of *Marma* in the body finds better scope in the battle field, when enemies counteract each other. The biggest war recorded in the history of India with the highest causality was the battle of *Mahabharata*[4].

In comparison to an elaborate and tedious description of all the structures of the body, the knowledge of regional Anatomy finds its better scope in the management of the injuries involving the *Marma* or the vital parts of the body. Besides the perfect knowledge of Anatomy the surgeons have to rely upon their own experiences and take care of the vital structures like nerves, arteries, joints and tendons, etc. Knowledge of *Marma* popularised the excellence of Indian surgeons in the field of the surgery even though the details of anatomical approaches in the field concerned was not performed.

Marma’s are the specific locations on the human body, which when traumatized, will either surely cause death or permanent deformity with extreme pain[5,6]. *Marmas* are the juncture of *Mamsa* (muscular tissue), *Sira* (blood vessels), *Snayu* (nerve or tendons or ligament), *Asthi* (bone tissue) and *Sandhi* (joints). The *Pranas* are specifically situated in *Marmas* by the virtue of

their nature, hence a trauma to any one of these *Marmas* will invariably causes physical disturbances in accordance with their particular types[7,8].

Marmabhighata (trauma or injury to *Marma*) is likely to produce subjective manifestations governed by the extent and the nature of injuries to the *Marmas*. The behaviour of *Marma* after injury or consequences are the end results in relation to existence of life process. Such consequences are the deformities precipitating over the body, time factor etc are mainly depends upon the prognosis and its patho-physiological changes. This consequential prognosis of *Marmabhighata* has been the unique approach of *Ayurveda*.

III. CLASSIFICATION

107 numbers of *Marmas* has been structurally classified into five types depending on the structures involved like *Mamsa* (muscles), *Sira* (blood vessels), *Snayu* (nerve or tendons or ligament), *Asthi* (bones) and *Sandhi* (joints). These *Marmas* are named as *Mamsa Marma*, *Sira Marma*, *Snayu Marma*, *Asthi Marma* and *Sandhi Marma*. In general, depending on the predominance of anyone of these above said structures, the body *Marmas* have been designated accordingly[9].

Table 1: Name & Number of *Marmas* according to Structural (*Rachananusar*) Classification

Mamsa Marma (Total 11)					
Sl.No	Name of the Marma	Number of Marma	Sl.No	Name of the Marma	Number of Marma
1	<i>Tala Hridaya</i>	4	3	<i>Guda</i>	1
2	<i>Indravasti</i>	4	4	<i>Stanarohita</i>	2
Sira Marma (Total 41)					
1	<i>Nila Manyā</i>	4	9	<i>Apasthamha</i>	2
2	<i>Matrika</i>	8	10	<i>Hridaya</i>	1
3	<i>Sringataka</i>	4	11	<i>Nabhi</i>	1
4	<i>Apanga</i>	2	12	<i>Parswa Sandhi</i>	2
5	<i>Sthapani</i>	1	13	<i>Brihati</i>	2
6	<i>Phana</i>	2	14	<i>Lohitaksha</i>	4
7	<i>Stanamula</i>	2	15	<i>Urvi</i>	4
8	<i>Apalapa</i>	2			
Snayu Marma (Total 27)					
1	<i>Ani</i>	4	6	<i>Vasti</i>	1
2	<i>Vitapa</i>	2	7	<i>Kshipra</i>	4
3	<i>Kashadhara</i>	2	8	<i>Amsa</i>	2
4	<i>Kurcha</i>	4	9	<i>Vidhura</i>	2
5	<i>Kurcha Sira</i>	4	10	<i>Utkshapa</i>	2
Asthi Marma (Total 8)					
1	<i>Katika Taruna</i>	2	3	<i>Amsa Phalaka</i>	2
2	<i>Nitamba</i>	2	4	<i>Sankha</i>	2
Sandhi Marma (Total 20)					
1	<i>Janu</i>	2	6	<i>Manibandha</i>	2
2	<i>Kurpura</i>	2	7	<i>Kukundara</i>	2
3	<i>Simanta</i>	5	8	<i>Avarta</i>	2
4	<i>Adhipati</i>	1	9	<i>Krikatika</i>	2
5	<i>Gulpha</i>	2			

The next most important classification of *Marmas* is based on the consequences or prognosis produced as a result of trauma over *Marmas*. Under this approach, all the 107 *Marmas* of the body have been again classified into five groups. They are *Sadya Pranahara* (death immediately after injury), *Kalantara Pranahara* (death after laps of sometime), *Vishalyaghna* (death soon after removing the *Shalya*), *Vaikalyakara* (injury causing disability) and *Rujakara* (injury causing severe pain). Pointing out the

number of these five types of *Marma*, *Sadyah Pranahara Marma* are 19, *Kalantara Pranahara* are 33, *Vishalyaghna* are 3, *Vaikalyakara* are 44 and *Rujakara Marmas* are 8 in number[10].

Table 2: Name & Number of *Marmas* according to classification based on consequences of trauma over the *Marma* area

Sadyah Pranahara Marma (Total 19)					
Sl.No	Name of the Marma	Number of Marma	Sl.No	Name of the Marma	Number of Marma
1	Srungataka	04	5	Guda	01
2	Adhipati	01	6	Hridaya	01
3	Shankha	02	7	Vasti	01
4	Matrika	08	8	Nabhi	01
Kalantara Pranahara Marma (Total 33)					
1	Simanta	05	7	Parswa Sandhi	02
2	Tala Hridaya	04	8	Brihati	02
3	Khipra	04	9	Nitamba	02
4	Indra Vasti	04	10	Stanamula	02
5	Katik- Taruna	02	11	Stanarohita	02
6	Apasthambha	02	12	Apalapa	02
Vishalyaghna Marma (Total 03)					
1	Sthapani	01			
2	Utksepa	02			
Vaikalyakara Marma (Total 44)					
1	Lohitaksa	04	10	Vidhura	02
2	Ani	04	11	Krikatika	04
3	Janu	02	12	Amsa	02
4	Urvi	02	13	Amsaphalaka	02
5	Kurcha	04	14	Apanga	02
6	Vitapa	02	15	Nila	02
7	Kurpara	02	16	Manya	02
8	Kukundara	02	17	Phana	02
9	Kaksadhara	02	18	Avarta	02
Rujakara Marma (Total 08)					
1	Gulpha	02			
2	Manibandha	02			
3	Kurchasira	04			

107 *Marmas* present all over the body are preciously situated over the trunk and the extremities. In view of significance, the *Marmas* situated over the trunk carry more importance in comparison to those situated over the extremities. *Ayurveda* emphasizes upon the *Shiras* (Head), *Hridaya* (Heart) and *Vasti* (Bladder) of the body, designated as *Trimarma* (Three vital parts)[11] and specifically indicated that these are the special seat of *Pranas* or life out of 107 *Marmas*.

III. MARMABHIGHATA

Any Injury to *Marma* due to incision, stabbing, burning or external blow is termed as *Marmabhighata* which is mild or severe in nature[12]. In general, any type of *Marmabhighata* is likely to produce subjective manifestations governed by the extent and the nature of injuries to the *Marmas*. In dealing with the manifestations, more emphasis has been given on the consequences produced as a result of trauma.

Certain clinical features like *Bhrama* (confusion), *Pralapa* (delirium), *Dourvalya* (weakness), *Chittanasha* (lack of consciousness), *Strastanga* (restlessness), loss of sensation of parts, rise in body temperature, loss of function of the joints, unconsciousness, shallow breathing, severe pain, bleeding, loss of perception of senses, giddiness, paleness of the body, burning sensation over the cardiac area and postural un stability are commonly seen when *Marmas* are traumatized[13,14]. All

these symptoms are found in a condition where death is sure. Besides the general manifestation of the *Marmabhighata*, following specific manifestations are observed when the body components like *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi marmas* are injured[15].

Mamsa Marma: continuous bleeding, reduced viscosity of blood, blood resembles like washed water of meat, pallor skin, loss of function of sense organs & speedy death.

Sira Marma: Constant flow of thick blood in large quantity, their manifests thirst, giddiness, dyspnoea, delusion (confusion or fainting) and hiccups which ultimately leads to death. These symptoms are suggestive of cut injury to the blood vessels particularly veins.

Snayu Marma: *Ayama* (contraction or bending) or atrophy of body, *Akshepa* (convulsion), *Sthambha* (stiffness of the body), Severe pain, inability in riding, sitting and standing, distortion of *Snayu*. *Marmabhighata* is suggestive of injuries to nerve or nerve plexus. Most of the symptoms like rigidity, pain, convulsion etc are specific symptoms of nerve injury.

Asthi Marma: Discharge of thin fluid mixed with bone marrow intermittently and severe pain continuously.

Sandhi Marma: Sense of feeling of full of thorns at the site of injury, squeezing of organ or lameness even when wound is completely healed up, loss of strength and movement, emaciation or atrophy (affected body organ) and swelling or oedema of the Joints (distal).

Dhamani Marma: Flow of warm, frothy blood with a sound and the person becomes unconscious.

Above all the sign and symptoms are results when *Marma* is injured. Apart from these, various sign and symptoms or some specific disease are produced in Individual *Marma* also[16].

Table 3: Consequence and patho-physiological changes resulting from trauma to specific *Marma* of lower extremity

Sl. No.	Name of the Marma	Location	Consequential Prognosis
1	<i>Kshipra</i>	In between great toe and the second toe of the foot	<i>Aksepa</i> (clonic spasm or convulsions) of the leg and ultimately leads to death
2	<i>Tala Hridaya</i>	Mid of the sole of the foot (plantar aspect) to a straight line drawn from the root of the middle toe	Pain & Death
3	<i>Kurcha</i>	Above and both sides of the <i>Kshipra Marma</i>	Shivering and bending deformity of the foot
4	<i>Kurcha Sira</i>	Both sides of <i>Gulpha Sandhi</i> (ankle joints)	Pain and swelling of the affected part
5	<i>Gulpha</i>	Junction of <i>Pada</i> (foot) and <i>Jangha</i> (leg)	<i>Stabdhapada</i> , <i>Khanjata</i> i.e. pain, rigidity or limping foot, and impotency
6	<i>Indravasti</i>	Mid of the <i>Jangha</i> (leg) in the line of the <i>Parsani</i> (heel or calcaneum)	Excessive hemorrhage leads to death
7	<i>Janu</i>	Junction of <i>Jangha</i> (leg) and <i>Uru</i> (thigh)	Limping or Lameness (difficulty in walking)
8	<i>Ani</i>	Both the sides of lower one third part of the femur, three fingers above the <i>Janu</i> (knee joint)	<i>Urusthambha</i> (Enormous swelling and stiffness of the thigh)
9	<i>Urvi</i>	Mid of the <i>Uru</i> (thigh)	Wasting of the <i>Sakthi</i> (atrophy of the arm and legs) due to loss of blood or diminished blood supply
10	<i>Lohitaksha</i>	Root of fold of <i>Uru</i> (thigh), above the <i>Urvi Marma</i> and below the <i>Vankshana Sandhi</i> (Hip joint)	<i>Pakshaghata</i> (hemiplegic) and <i>Shosa</i> (atrophy) of the whole inferior extremity due to loss of blood or diminished blood supply
11	<i>Vitapa</i>	In between the <i>Vanksana</i> (Groin) and the <i>Vrisana</i> (Testis)	Rise impotency or oligospermia

Table 4: Consequence and patho-physiological changes resulting from trauma to specific *Marma* of upper extremity

Sl. No.	Name of the Marma	Location	Consequential Prognosis
1	<i>Kshipra</i>	In between thumb and the index finger	<i>Aksepaka</i> (clonic spasm or convulsions) of the hand and ultimately leads to death
2	<i>Tala Hridaya</i>	Mid of the palm at joining the line along with the middle finger	Severe pain and death
3	<i>Kurcha</i>	Above on both sides of <i>Kshipra Marma</i>	Shivering and bending deformity of the hand
4	<i>Kurcha Sira</i>	Below and one side of <i>Manibandha sandhi</i> (Wrist joint)	Pain and swelling of the affected part
5	<i>Manibandha</i>	At the junction (wrist joint) in between palm of the hand and fore hand	Pain, rigidity or <i>Kunitwa</i> (Deformity)
6	<i>Indravasti</i>	Mid of the fore arm facing to ventral aspect of the hand	Excessive hemorrhage leads to death
7	<i>Kurpura</i>	At the junction of the forearm and arm	Permanent disability of the limb
8	<i>Ani</i>	On both the sides, three <i>Angula</i> (finger) above the elbow joint	Swelling, Stiffness or paralysis of the arm
9	<i>Bahvi</i>	In the mid of the arm	Wasting or atrophy of the arm due to loss of diminished blood supply
10	<i>Lohitaksha</i>	At root of the upper extremity (brachium) adjacent to auxiliary fold and above the <i>Bahvi Marma</i>	<i>Pakshaghata</i> (hemiplegic) and <i>Shosa</i> (atrophy) of the whole upper extremity due to loss of blood or diminished blood supply
11	<i>Kakshadhara</i>	In between the chest and arm pit	Precipitates paralysis of the limb

Table 5: Consequence and patho-physiological changes resulting from trauma to specific Marma of Head & Neck

Sl. No.	Name of the Marma	Location	Consequential Prognosis
1	<i>Nila Manya</i>	High up in the neck on either side of the <i>kantha nadi</i> (trachea)	Loss of speech, defective voice, loss of taste
2	<i>Matrika</i>	Anterior external, post external jugular veins and common facial veins	Immediate death
3	<i>Krikatika</i>	Junction of head and neck	Instability of neck and death
4	<i>Vidhura</i>	Below and behind the ear	<i>Mookatwa</i> (Mutism/Aphasia)
5	<i>Phana</i>	Both side of nasal passage & near the roof of the nose	Loss of sense of Smell
6	<i>Apanga</i>	Outer side of orbits and below the lateral end of the <i>Bhru</i> (eyebrow)	<i>Andhatwa</i> (Blindness or defective vision)
7	<i>Avarta</i>	Above and below the <i>Bhru</i> (eyebrow)	<i>Andhatwa</i> (Blindness or impaired vision)
8	<i>Sankha</i>	In between <i>Karna</i> (ear) and <i>Lalata</i> (forehead) and just above the termination of the superciliary arch	Immediate death
9	<i>Utkshepa</i>	Above the <i>Sankha</i> (temple) and near the hairy margin of the scalp (parietal region on the scalp) on both the sides of the head	Keeps the person alive till it lodges over theses or if it comes out after suppuration but he cannot survive if the <i>Shalya</i> (foreign body) is extracted out by force immediately after injury
10	<i>Sthapani</i>	In between the <i>Bhrus</i> (eye brows or superciliary arches and underneath the bony vault)	Same as <i>Utkshepa Marma</i>
11	<i>Simanta</i>	Five structural Joints in the vault of skull	<i>Unmada</i> (insanity), <i>Bhaya</i> (Fear) and <i>Chittanasa</i> (Madness or lack of

			Consciousness) leading to death
12	<i>Sringataka</i>	Junction of the confluence of <i>Siras</i> (vein) providing nutrition to the <i>Ghrana</i> (nose), <i>Shrotra</i> (ear), <i>Akshi</i> (eyes) and <i>Jivha</i> (tongue)	Immediate death
13	<i>Adhipati</i>	Inside the cranium superiorly at the confluence of <i>Sira</i> (vain). This point is just under the romabert (ringlet of the hair)	Immediate death

Table 6: Consequence and patho-physiological changes resulting from trauma to specific *Marma* of Thorax

Sl. No.	Name of the <i>Marma</i>	Location	Consequential Prognosis
1	<i>Hridaya</i>	Superficially located in between <i>Stana Granthi</i> (breast) and near the opening of the Stomach	Immediate death
2	<i>Stanamula</i>	Bilaterally two fingers below the <i>Stana</i> (breast)	Fills up the <i>Kostha</i> (thoracic cavity) with cough and proves to be fatal with troublesome cough & breathing
3	<i>Stanarohita</i>	Two fingers above the <i>Chuchuka</i> (nipples) of both the <i>Stana Granthi</i>	Fills the cavity with blood and ends in death due to <i>Kaph</i> and dyspnea
4	<i>Apalapa</i>	Below the <i>Amsakuta</i> (Shoulder joint) and above the sides or lateral aspect of chest (in the axilla)	Hemorrhage leads to result in pus formation becomes fatal
5	<i>Apasthambha</i>	Both the side of <i>Ura</i> (Chest)	Fills the chest with air and results in death due to <i>Kapha</i> and dyspnea

Table 7: Consequence and patho-physiological changes resulting from trauma to specific *Marma* of Abdomen

Sl. No.	Name of the <i>Marma</i>	Location	Consequential Prognosis
1	<i>Guda</i>	Attached to <i>Sthulantra</i> (Large intestine) i.e. anal region	Immediate death
2	<i>Vasti</i>	Within the <i>Kati pradesha</i> (Pelvis) i.e. bladder	Immediate death except an wound which is formed during extraction of a calculus
3	<i>Nabhi</i>	In between <i>Pakvashaya</i> (Colon) and <i>Amashaya</i> (Stomach) i.e. umbilicus	Immediate death

Table 8: Consequence and patho-physiological changes resulting from trauma to specific *Marma* of Back

Sl. No.	Name of the <i>Marma</i>	Location	Consequential Prognosis
1	<i>Katikataruna</i>	Both the side of the <i>Prsthavamsa</i> (Vertebral column) corresponding to each <i>Shronikasthi</i> (Hip bone)	Pallor, discoloration of skin due to hemorrhage or loss of blood
2	<i>Kukundara</i>	Both the side of the <i>Prsthavamsa</i> (Vertebral column) and the lateral sides of the outer part of <i>Jaghanasthi</i> (femur)	Loss of sensation and movement in lower part of the body
3	<i>Nitamba</i>	Above <i>Shroni kanda</i> (Hip bone) which covers the <i>Ashaya</i> (Viscera) and connects the lateral part of Vertebral column	Sosa (atrophy) in lower extremity with weakness leads to death
4	<i>Parsvasandhi</i>	Just at the middle of <i>Jaghanaparsva bhaga</i> (Gluteus region) and joining the	Death due to collection of blood in Pelvic cavity

		lower part of two flanks	
5	<i>Brihati</i>	Posteriorly both side of the <i>Pristhavamsa</i> (Vertebral column) at the level of <i>Stanamula</i> (Base of the breast)	Excessive bleeding results into death
6	<i>Amsa Phalaka</i>	In the upper part of the <i>Pristha</i> (back) near to the scapular region and on both the sides of vertebral column attached to <i>Trika</i> (Sacrum)	<i>Sosa</i> (Atrophy) of <i>Bahu</i> (Arm)
7	<i>Amsa</i>	In between the root of the arm and neck, joins the <i>Amsa-peetha</i> (Scapular region) and <i>Skandha</i> (Shoulder) together	Stiffness in upper extremity produces loss of function to the arm

3.1 EFFECT OF MARMABHIGHATA

If *Sadya Pranahara Marma* gets injured it may leads to *Kalantara Pranahar* or death. If *Kalantara Pranahara Marma* gets injured it may lead to *Vaikalyakara*. If *Vishalyghna* gets injured it may lead to *Vaikalyakara*. If *Vaikalyakara Marma* gets injured It will leads to distress and pain after a certain period while *Rujakara Marma* injury leads to mild pain[17].

IV. DISCUSSION

The prognostic consequence of *Marmabhighata* is the patho-physiological changes precipitating over the concerned part of the body. The five categories like *Sadya Pranahara*, *Kalantar Pranahar*, *Vaikalyakara Vishalaghna*, and *Rujakara* have been worked out based on the end results that one has to face soon after injuries over the *Marmas*. The consequences and the symptomatology point out the prognosis of the case are variable as per site and locations of the *Marmas* and its injury. It is apparent from the above said statement that if all the types of *Marmas* are injured extensively they may all prove fatal.

Trauma to *Sadya Pranahara Marmas* results in inability of sense organs to perceive their respective subjects. Mind and intelligence can't function properly and severe pain precedes the death. Fatal period of death is immediate or within seven days. It is noted that this group of *Marmas* possesses *Agni Mahabhuta* as fiery properties get very quickly inflamed and they prove fatal to the life. When *Kalantara Pranahara Marma* is injured, loss of *Agni*, *Soma* and *Dhatu*s (blood etc) causes extreme pain leading to eventual death. Fatal time is 15 days to one month. As this group of *Marmas* posses *Agni* as well as *Saumya* guna (properties), *Agni guna* gets inflamed rapidly but *Saumya guna* takes a considerable time in diminishing. Thus this group of *Marmas* prove fatal after some time of Injury. An injury to any of the *Vaikalyakara Marmas* produced permanent disability of the affected part. Death supervenes immediately or after some time. As this group of *Marmas* possesses *Saumya guna*, it supports the *Prana* by virtue of its stabilising and cooling properties. Injured *Vishalyaghna marmas* causes *Shwasa* (Asthma), *Kasa* (Cough) and results in death. Death does not occur until weapon exists at site of entry. As soon as weapon is removed death occurs. *Vishalyghna Marmas* are *Vataja* in properties, so long as the *Vata* remains due to obstruction by the *Shalya* (foreign body) & patient survives. But as soon as the *Shalya* is extracted out, the *Vata* escapes from the *Marma sthana* and patient dies. Therefore, if the *Shalya* comes out after suppuration in *Marmasthana* then the patient can survive. Injured *Rujakara Marmas* gives rise to various types of pain or pain like condition in affected organs, which ultimately results in deformity of the same part. This group of *Marmas* are predominant in *Agni* and *Vayu gunas*. They are specially pain germinating in their properties. On the contrary, one says that the pain results from all *Panchbhutas* [18].

In another context *Sushruta* has further illustrated the presence of *Trigunas*, *Mahagunas* and the *Bhootatma* (Supreme power or life principle) in the *Marmas* also, where *Soma* (*Jala Tatva*), *Maruta* (*Vayu Tatva*), *Teja* (*Agni Tatva*) representing the *Tridosas* in the body and *Satva*, *Raja*, *Tama* as well as the *Bhootatma* are situated. Hence injuries to these *Marmas* are likely to result fatal[19].

The *Tridosha* in the body have got their *Pancha Bhautik* origin. The basic elements of *Pancha bhautik* are the main constituting component of *Tridosha*. It is seen in the above verse that the consequence of traumatised *Marma* has got direct bearing on the predominance of *Tridoshas* over there.

This description though gives more emphasis for the presence of *Sharirik dosha* and *Manasik dosha* at the site of *Marma* but in true sense both the *doshas* are purgating all over the body. Any trauma to these *Marmas* are likely to provoke both the *Shareerik* and *Manasik dosha* which thereby affect the *Sharira & Mana* (body and mind) and thus when the base (body and mind) is afflicted the *Jeevatma* or *Bhootatma* itself ceased to be there.

Again, there are four types of *Siras* i.e., *Vata*, *Pitta*, *Kapha*, and *Rakta* carrying channels in the body. These channels remain seated in *Marma sthanas* and any injury to them may lead to death due to excessive loss of the blood and other body tissues resulting into aggravation of *Pitta* which in turn, causes increased thirst, emaciation, toxicity, unconsciousness, severe perspiration, weakness and looseness of body[20].

V. CONCLUSION

Marma have been taken up as a vulnerable points or weak point in the body which when gets injured or traumatized leads to fatality. In view of underneath body component structures like *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*, the *Marmas* have been accepted as a juncture of these structures. The *Marmabhigata* on such structures are likely to precipitate the paralysis or atrophy or weaknesses in the limbs are over the areas supplied by them or other specific diseases or death arises. The consequences or the prognostic changes occurring due to trauma over these five types of *Marmas* are not due to predominance of *Doshas* or *Dhatus* present over the area concerned, but it is the *Swabhava* (natural inode quality) of that particular *Marma* which determines the end results. The intensity of trauma that decides the prognosis irrespective of structural components like *Mamsa*, *Sira*, *Snayu* etc or functional elements like *Doshas*.

In present day of advance surgery, there should be clear-cut knowledge of vascular system, nervous system, muscles and their origin insertion, ducts and their courses, with a view to have an expertise operations on the patients. The ancient literature, no doubt, lacks with the knowledge of advance anatomical background in comparison to the present advances in the field. Though knowledge of anatomy and physiology of today have really removed the mystery of surrounding structure situated at the site of *Marmas* and minimized or made more less or nil the hazardous and dangerous task for surgeon. The concept of *Marma* described in ancient literature is possibly to make the subject matter more crystallized, based on the wide experience of expertise surgeons paying more attention towards the vital structures like arteries, veins, nerves tendons and ligaments. The surgeons based on their practical knowledge could map out the dangerous spots of the body and consequently postulate their own theory of *Marma*. This was the reason that made the surgery of ancient India to get more popularized and enabled it to achieve the highest position during the days of ancient civilization of the world.

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Author's Profile

Hiraman Banjare pursued B.A.M.S & M.D (Sharir Rachna) from Pt. Ravishankar Shukla University, Raipur, Chhatisgarh, India. He is currently working as an Associate Professor & Head of the Department Sharir Rachana in Mahaveer college of Ayurvedic science, Rajnandgaon, Chhatisgarh. He is currently pursuing his Ph. D. degree on subject entitled "A critical study on Rujakar Marma with special reference to Structural Anatomy" under the guidance of Susil Kumar Meher at Sambalpur University, Burla, Odisha, India. He is acting as external examiner for U.G (B.A.M.S) courses of Sambalpur University, Odisha

Susil Kumar Meher pursued B.A.M.S from Sambalpur University, Sambalpur, Odisha and M.D in Samhita Sidhanta from Gujrat Ayurved University, Jamnagar, Gujrat, India. He is completed his Ph.D from Sampurnanand Sanskrit University, Varanasi, India. He is retired from his job as Associate Professor, Department of Samhit & Sidhanta, Govt Ayurved College, Balangir, Odisha on 30th April 2019. He is acting as external examiner, question paper setter for U.G (B.A.M.S) courses of various Universities

Sachin Kumar Baghel pursued B.A.M.S from Maharashtra University of health science, Nashik and M.D in Agadtantra from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur, Maharashtra, India. He is currently working as an Associate Professor in Department of Agadtantra at Govt Ayurvedic College, Bilaspur, Chhatisgarh. He is written three books on Agadtantra in Hindi language (Agad Tantra Evam Visha Vggyan, Pratyakshika Agadtantra & Agadtantra upyogi Saaranee tatha shlok) for B.A.M.S students.

Sujit Kumar Dalai pursued B.A.M.S from Utkal University, Bhubaneswar and M.D (Rasashastra & B.K) from National Institute of Ayurved, Jaipur, Rajasthan, India. He also pursued Ph.D from Sambalpur University, Sambalpur, Odisha, India. He has worked as Senior Research Officer at Arogyadham, Deendayal Research Institue, Chitrakoot, Satna, M.P, India. Now he is working as an Professor & Head of the Department Rasashastra and Bhaisajya Kalpana at Bharati Ayurved Medical College and Hospital, Durg, Chhatisgarh, India. He has received sponsored project form KVIC, Bhopal, India entitled "Establishment of In house test Laboratory (honey)" and completed the project at DRI, Chitrakoot, Satna, M.P in year 2006. He has published more than 25 research papers in reputed international and national journals. He has presented research papers in oral presentation in various international and national conferences. He is acting as external examiner, question paper setter for U.G (B.A.M.S)& D.Pharm (Ayurved) courses of various Universities.