

## A COMPREHENSIVE STUDY ON LOHITAKSHA MARMA

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### ABSTRACT

The *Marma Vijnana* (Science of vital points) has been dealt in *Shareera Sthana* of Ayurvedic texts like *Sushruta Samhita* (Textbook), *Astanga Samgraha* (Textbook) and *Astanga Hridaya* (Textbook). The references related to *Marma* are also available in *Charaka Samhita*. Almost all the texts of Ayurveda have mentioned the total number of *Marma* as 107. Out of these *Lohitaksha Marma* is considered under the *Shakhagata Marma* (vital points of the limb region). The concept of *Marma* is important in the clinical and surgical point of view. In this article an attempt is made to study the *lohitaksha Marma* and its *Viddha Lakshana* (Traumatic effect) by considering the related literature.

**Keywords:** *Marma, Lohitaksha, Viddha, Shakha*

### INTRODUCTION

*Marma* point (Vital point) is defined as the site where there is confluence of structures like *Mamsa* (Muscular component), *Sira* (Vascular component), *Snayu* (Neuroconnective tissue component), *Asthi* (Sclerous component) and *Sandhi* (Articular component) and *Prana* (Life force) resides making it as its specific

place. Knowledge of the *Marma* is described as half the knowledge of *Shalyatantra* (Science of surgery), as persons injured in the vital spot die immediately or suffer from unforeseen ailment which is life threatening; if anyone survives by the efficiency of the physician, is sure to suffer from deformities.<sup>1</sup>Injury to the *Mar-*

ma, though slight, will produce severe pain; similarly, the disorders localized in the *Marma Sthana*. Hence, they should be treated with great care and effort.<sup>2</sup> Most of the ancient texts of *Ayurveda* had given importance to *Marma* and explained 107 *Marma* in a separate chapter.

The *Lohitaksha marma* is one among the *Shakhagta Marma* it is located above the *Urvi Marma* and below the *Vankshana* in the lower limb and in upper limb it is located above the *Bahwi* and below the *Kaksha* and injury leads to paralysis due to blood loss

**Table 1:** Description of *Lohitaksha Marma*

Classification	Details
<i>Shadanganusara</i> (Gross division of body in to six regions)	<i>Shakhagatamarma</i>
<i>Sankhyataha</i> (Based on Number)	4 (2 in upper limb and 2 in lower limb)
<i>Pramanataha</i> (Based on measure)	½ <i>anguli</i> (0.96 cm)
<i>Rachanataha</i> (Based on structure)	<i>Sira marma</i>
<i>Parinamataha</i> (Based on prognosis)	<i>Vaikalyakara marma</i>
<i>ViddhaLakshana</i> (Based on traumatic effect)	Paralysis due to blood loss

### Review of Literature

*Vyutpatti* of *Marma Shabda* (Etymology)

The origin of the word *Marma* is seen in various texts as given below *Amarakosha* explains that the word *Marma* is derived from Sanskrit term *Mru+Manin* or *mru Pranathyage*. It means that which causes death or death like miseries<sup>3</sup>.

*Shabdhalpadruma* describes *Mru + Sarvadhathubhyo Manin*. It also mentions *Marma* as *Sandhi Sthanam* or *Jeeva Sthanam*.<sup>4</sup>

*Vachaspathya* says that the word *Marman* is taken from *Mri Dhatu*, adding *Maneen Pratyam*, *Mru – Maneen*, which means *Jeeve Sthana* or *Sandhi Sthana*.<sup>5</sup> According to Sanskrit-English dictionary of Sir M. Monier-Williams, *Marma* means mortal spot, Vulnerable point, any open or exposed or weak or sensitive part of the body.<sup>6</sup>

The *Vaydyaka Shabdha Sindhu* as explains *Marma Sthana* as *Jeeva Sthana*.<sup>7</sup>

### Derivation of *Marma*

1. *Marma* means that which kills.<sup>8</sup>
2. The vital spots that which causes death.<sup>9</sup>
3. That which cause *Upahata* to *Anga* is called as *Marma*.<sup>10</sup>

### Definition of *Marma*

Acharya Susruta has defined *Marma* as the site where there is a conglomerate of *Mamsa, Sira, Snayu, Sandhi and Asthi*. Especially *Prana* dwells at

these sites.<sup>11</sup> According to *Astanga Sangraha*, any part of the body where the uneven pulsations/reflex are elicited and pressure over that part causes pain, is called as *Marma*.<sup>12</sup> Narahari the author of *Rajanighantu* defined *Marma* as the seat of life.<sup>13</sup> Acharya Caraka has opined that it is the site of *Chetana*, so the sense of pain will be more in this region compared to other parts of the body.<sup>14</sup> *Ash-tanga Hridaya* has defined *Marma* as the site where *Mamsa, Sira, Snayu, Asthi, Sandhi and Dhamani* confluence. It is also said that the sites which are painful, tender and show unbearable throbbing pain after injury is considered as *Marma*.<sup>15</sup> *Bhavaprakasha* has defined *Marma* as the meeting place of *Mamsa, Sira, Snayu, Asthi and Sandhi* where *Prana* or life resides.<sup>16</sup>

### *Marma* And Fundamental Components of The Body

*Panchamahabhuta* (*Prithvi, Ap, Tejo, Vayu* and *Akasa*) and *Atma* constitute the living body. *Nirvikara Atma/Chetana* becomes *Vikarayukta* when it comes in contact with *Panchamahabootatmaka Shareera*. In a living being the state when the three *Dosha* are functioning normally, the *Agnis*, the *Dhatu* and *Mala* function accordingly and if its *Atma, Indriya* and *Mana* are pleasant the state is defined as health<sup>17</sup>. The life is sustained by *Prana* which is incorporated at the site of *Marma*. *Susruta*

has given a broad meaning to the word *Prana*. *Shareera Dosh* that is *Soma (Kapha)*, *Maruta (Vata)*, *Teja (Pitta)* and *Manasika Dosh* that is *Satva*, *Raja* and *Tama* in the *Marma*. So, if the *Marma* gets injured all the *Dosh* gets vitiated. *Agni*, *Soma*, *Vayu*, *Satwa*, *Rajah*, *Tamah*, *Bhuthatma* and *Panchendriyas* are called as components of *Prana*. It engulfs all basic factors that sustain life. *Agni* sustains life by *Parinama*, *Soma* by *Poshanam*, *Vayu* by *Chalanam* (conduct, regulate and integrate all functions). *Satwa*, *Raja*, *Tama* by converting themselves into *Manas*. *Panchendriya* sustain by sensory perceptions. This is the core of *Marma* concept *Acharya Susruta* classified *Marma* into *Agneya*, *Soumya* and *Vayavya*, which is also indirectly related with the *Tridosha*. As *Agni Guna* is predominant, the delicate *Avayavas* disintegrate easily. *Soma* by its *Sthira* and *SheetaGuna* resists the destructive action of *Agni*. *Vayu* causes severe pain

## DISCUSSION

The term *Lohitaksha* is comprising *Lohita* + *Aksha* words. Term *Lohita* is synonymous of *Rakta*. The word *Aksha* is derived from ‘*Kshee Dhatu*’ i.e., *KsheeKsheeyate*’ means sort of loss/deterioration. In the term *Aksha*, letter ‘A’ is joined as *Upasarga*, so the meaning of word *Aksha* is “excessive.” Eventually the meaning of word *Lohitaksha* is taken as excessive bleeding.<sup>18</sup> Generally *Marma* is composed of five fundamental structures (*MarmaVastu*) i.e., *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*. Among these, structural, functional and pathological point of view, one may be very dominant therefore the symptoms exhibited after trauma will depend upon the involvement of that particular. *Lohitaksha Marma* belongs to *Sira Marma* group. On the basis of literature study, it is revealed that *Lohitaksha Marma* is mainly composed of Axillary artery and its branches, Axillary vein with its tributaries in relation to upper limb and in case of lower limb the femoral artery and its branches. As per the references available from the *Samhita*, location of the *Lohitaksha Marma* in the lower limb is said to be above the *Urvi Marma* and below the *Vankshana Sandhi*, at the root of the *Uru*.

So, in the upper limb it should be understood as the *Lohitaksha Marma* is located above *Bahvi Marma* and below *Kaksha Sandhi*, at the root of the *Bahu*. The location of *Lohitaksha Marma* is not precisely mentioned but it can be understood on the basis of distal and proximal landmark. Here the *Vankshana Sandhi* is to be correlated to the hip joint. *Uru Moola* can be understood in terms of either, inguinal fold or angle between the neck and shaft of the femur because head of the femur is involved in the articulation of hip joint. Hip joint is lying 1.2 cms below the inguinal ligament and just below the joint there is angulation between neck and shaft of femur. On the basis of these features and classical description the location of *Marma* can be exacted between hip joint and neck shaft angle of femur. In these mentioned areas mainly femoral artery, vein with femoral sheath and femoral nerve is seen. In case of upper limb *Kaksha Sandhi* is to be correlated with the shoulder joint. *Bahu Moola* can be understood in terms of surgical neck of humerus. Above the surgical neck there find the articulation between head of humerus and glenoid cavity of scapula. On the basis of features and classical description the location of *Marma* can be exacted between the shoulder joint and surgical neck of humerus. In above mentioned area mainly axillary artery, axillary vein and cords of infraclavicular part of brachial plexus are located. The injury effect of *Lohitaksha Marma* is mentioned as there will be *Marana* and *Pakshaghata* or *Saktisada* due to *Rakta Kshaya*. *Rakta* is considered as one among the *Dasha Pranayatana*.<sup>19</sup> The *Rakta* is the *Moola* of the *Shareera*. It does the *Dharana* of the *Shareera*. The *Rakta* nourishes the further *Dhatu*s. So, loss of *Rakta* will lead to death. *Sushruta Samhita* mentions one should do the *Samrakshana* of the *Rakta* and it is known as the *Jeeva*.<sup>20</sup> That may be the reason why even though the *Lohitaksha Marma* is the *Vaikalyakara Marma*, in the *Viddha Lakshana* of this *Marma*, *Marana* is mentioned. Vascular injuries of the extremities remain a major cause of limb amputation and death, if not treated early and properly.<sup>21</sup> Severe haemorrhage from any of the major vessels will lead to the haemorrhagic shock. The *Pakshaghata* may be caused by the ischemia or due to the injury of the

cords and branches of the brachial plexus/femoral nerve. Axillary and subclavian vascular injuries constitute less than 5% of all vascular trauma but are associated with morbidity and mortality rates ranging from 3% to 33%. Concurrent brachial plexus injuries contribute greatly to the morbidity rate of thoracic outlet vascular trauma.<sup>22</sup> The meaning of the *Marana* can be understood as Localised ischemia due to the lack of the blood supply can be understood as *Marana*. The other *Viddha Lakshana* is *Pakshaghata*. The *Pakshaghata* can be considered as the paralyzed part. The *Pakshaghata* may be due to the ischemia, where is a chance of paralysis of that particular limb, due to haemorrhage. The early symptoms of the limb ischemia are there will be pain, muscle tenderness, sensory and motor loss.

## CONCLUSION

Considering the literature related to The *Lohitaksha Marma* is situated above the *BahviMarma* and below the *Kaksha Sandhi* (shoulder joint) in case of the upper limb. The *Bahumoola* is considered as the surgical neck of the humerus in case of the upper limb. In the lower limb the site of *Lohitaksha Marma* is above the *Urvi Marma* and below the *Vankshana Sandhi*. The anatomical structures to be considered under the *Lohitaksha Marma* in the lower limb are part of the femoral artery where the origin of profunda femoris is seen along with accompanying femoral vein and a part of femoral nerve. In the upper limb the structures are third part of the axillary artery where the three branches arise along with the accompanying vein. The *Pakshaghata* is considered as pertaining to that particular limb, which is injured, caused due to increased blood loss leading into ischemia and paralysis or due to the injury of the surrounding nerves. *Marana* is considered in three ways i.e., localized death of the tissues due to ischemia or death of a person due to thrombus dislodged from the site of *Marma* causing pulmonary embolism and also due to excessive loss of blood causing shock or severe pain causing *Marana Sadrishya Duhkha*.

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