

AN ANATOMICAL EXPLORATION OF LOHITAKSHA MARMA

Dr. Vidya Choudhary*¹, Dr. Anju Vashisth², Dr. Jitender Kumar Sharma³, Dr. Purushottam Das Sharma⁴,
Dr. Dinesh Kumar Sharma⁵ and Dr. Deepa⁶

^{1,2}PG Scholar, P.G. Department of Rachana Sharir, M.M.M. Government Ayurved College Udaipur Rajasthan.

³Professor P.G. Department of Rachana Sharir, M.M.M. government Ayurved College Udaipur Rajasthan.

⁴Associate Professor P.G. Department of Rachana Sharir, M.M.M. government Ayurved College Udaipur Rajasthan.

^{5,6}Lecturer, P.G. Department of Rachana Sharir, M.M.M. Government Ayurved College Udaipur Rajasthan.

*Corresponding Author: Dr. Vidya Choudhary

PG Scholar, P.G. Department of Rachana Sharir, M.M.M. Government Ayurved College Udaipur Rajasthan.

Article Received on 26/04/2023

Article Revised on 16/05/2023

Article Accepted on 06/06/2023

ABSTRACT

According to *Ayurveda*, *Marma* is one of the crucial factors that has a substantial clinical impact. *Marma* are the vital sites on the body that are connected to many organs and nerves. *Marma* points are junction points in the body where *matter*, *mind*, and *consciousness* meet. These vital points are responsible for the circulation of energy and prana (the breath of life). *Lohitaksha Marma* is considered as *Shakhagta Marma*, present in each limb. *Marma* points, which are coming from ancient Vedic traditions, are the precursors of acupressure and acupuncture. According to "*Sushruta - lohitaksha marma* is the vital point in the upper limb at axillary fossa and in the lower limb upper part of the anterior compartment of the thigh at the region of apex of the femoral triangle. Injury at these vital points leads to haemorrhage, neuromuscular diseases, paralysis to limb and ultimately death occurs.

KEYWORDS: *Ayurveda*, *lohitaksha marma*, *marma*, vital points.

INTRODUCTION

Marma definition

1. According to Acharya Sushruta

Marma (fatal spots) are a confluence of muscles, veins, ligaments, bones and joints. These are the places where the *Prana* (vital life force) resides naturally.^[1]

2. According to Acharya Aruna Dutta

Those locations, which when injured lead to destruction of life, are called *Marmas*.^[2]

3. According to acharya dalhan

Any injury to *marma* points may leads to death (21, 24, and 28)^[3]

4. According to Rajnighantu-

Raj Nighantu, *manushya varg* 64.^[4]

Marmas are seats of life (jeevasthana) and meeting point of many important structures (sandhisthana)

5. According to acharya Bhav Prakash

(*Bhava Prakash*, *Purva Khanda* 3/223)

The meeting point of vein, ligament, joint, muscle and bone is called *Marma* point.

Prana especially resides in these points.^[5]

6 According to Acharya Sharangadhara

(*Sharangadhara Samhita*, *Purva Khand*, 5/39)

The *Marma* points in the body are mostly the foundational locations of life - this has been told by the ancient sages.^[6]

Prana especially resides in the *marma* locations.

7. According to acharya charak

(*Charaka Samhita Siddhi* 9/3)

In case of affliction in any *marma* point, there is more pain (excruciating type) than any other part of the body, because of the specific attachment of *chetana* (consciousness) to these spots.^[7]

Three famous Ayurvedic classics: *Charak*, *Sushruta*, and *Vagbhatta*, which contain a lot of information about their location, frequently discuss *marmas*.

Marma points are specific anatomical locations in your body through which the energy of these elements is believed to flow. *Marma* point's therapy is the practice of stimulating these spots through gentle massage therapy.^[8]

Aim and objectives

1. To collect the literature of *lohitaksha marma* from ayurveda text books.
2. To locate the exact position of *lohitaksha marma* and study its structure.
3. To study *marmaghata* signs & symptoms of *lohitaksha marma* and their *vaikalyakaravta*.

MATERIAL AND METHODS

Conceptual Study - Articles in journals, text books, thesis, and internet materials were reviewed and information and references related to *Marma* were collected.

Cadaveric study – Study of 65 years old male cadaver. Cadaveric dissection of upper and lower limb was carried out on human embalmed cadaver.

LITERATURE REVIEW

Lohitaksha marma

1. *Lohitaksha marma is situated upper from uri marma and below to vankashan santhi at the root of oorumool.*^[9]
2. *"Vaikalaykarma cha."*^[4]
3. *"There is a lohitaksha marma at uru's mool.injury at this point cause pakshaghat (paralysis). It is due to excessive blood loss at this point."*^[10]

The term *lohitaksha* means *marma* site look like an eye of the blood (applied for blood vessels), *Lohitaksha* also means vessels in the axis

Site- upper limb & lower limb

Number - 2 in upper & 2 in lower limb

Anatomical site - situated just above the oorvi *marma* & below the *vankashan sandhi*.

Measurement- half finger

Structural anatomy - *sira marma*

Prognostic status - *vaikalyakar marma*

Injury results - paralysis & atrophy of the extremities

Regional anatomy - axillary fossa in upper limb and femoral triangle in lower limb.^[11]

Oorumoole means root of the thigh *lohitaksha marma* can be understood in the above $\frac{1}{3}$ of the anterior compartment of the thigh. Known as the femoral triangle.

Femoral triangle is a triangular depression on the front of the upper one third of the thigh immediately below the inguinal ligament.

Boundaries

Lateral border: medial border of sartorius

Medial border: medial border of adductor longus

Superior border: inguinal ligament

Floor: iliopsoas (laterally) and pectineus (medially)

Roof: skin, subcutaneous tissue, a continuation of Scarpa's fascia, great saphenous vein (joins the femoral vein), superficial lymph nodes, fascia lata

The apex, which is directed downwards, is formed by the point where the medial and lateral boundaries cross.

The apex is continuous, below, with the adductor canal.

Contents

1. Femoral artery and its branches.
2. Femoral veins and its tributaries.

3. Femoral nerves.

Femoral sheath (thickening of the deep fascia of the thigh) which has three compartments (from lateral to medial):

Femoral canal (the medial compartment of the femoral sheath) which contains fat and lymph nodes (of Cloquet)

Upper limb *lohitaksha marma*

In the upper limb *lohitaksha marma* is situated at just below & to the medial side to the shoulder joint.

Following structure as constituents of this *marma*.

Boundaries

Anterior wall - Pectoralis major Pectoralis minor Clavipectoral fascia	Medial wall - Upper 4 ribs & intercostal muscles Serratus anterior
Posterior wall- Subscapularis Teres major Latissimus dorsi	Lateral wall- Shaft of humerus Coracobrachialis Short head of biceps brachii.

In the upper limb *lohitaksha marma* is situated at just below & to the medial side to the shoulder joint.

Following structure as constituents of this *marma*

1. Third part of axillary artery
2. Brachial artery with its vaena comitants
3. Median nerve
4. Ulnar nerve
5. Pectoralis major
6. Pectoralis minor

Axillary artery - branches of the 3rd part of axillary artery

1. Anterior circumflex humeral artery
2. Posterior circumflex humeral artery
3. Subscapular artery

Brachial artery -it begins at the lower border of teres major muscle as continuation of axillary artery

Branches- muscular branches

Profunda brachii artery - just below teres major

Superior ulnar collateral - Arises upper part of the arm

Nutrient artery of humerus

Median nerve - is closely related to the brachial artery throughout its course in the arm.

Ulnar nerve -ulnar nerve runs on the medial side of the brachial artery.

Pectoralis major muscle -

Broad superficial muscle found superficial in the anterior chest wall.

Pectoralis minor muscle - fan shape muscle found just below to the pectoralis major muscle

Both muscles covers this *marma* site anteriorly.^[13]

Cadaveric study

The cadaver was palced in supine position.

Dissection of femoral triangle

After the reflection of the superficial fascia, the deep fascia of the thigh was visible. A vertical incision was given in the deep fascia of the thigh from tubercle of iliac crest till the lateral condyle of femur and remove the deep fasciae in lateral part of thigh. Then the entire deep fascia was removed from upper one third of the front of thigh. Then sartorius muscle was identified by stretching

gently across the thigh from lateral to medial side and the adductor longus muscle extending from medial side of the thigh toward lateral side into the femur, was crossed by the sartorius. This triangular depression in the upper one third of the thigh is the femoral triangle. The base of this triangle is formed by the inguinal ligament. Dissect its boundaries and contents that is femoral nerve, artery and vein.



Figure 1: Dissection view of femoral triangle.

Dissection of axillary fossa

The upper limb was abducted at the right angle to the trunk. The lower skin flap was reflected till the posterior axillary fold made up by subscapularis, teres major and latissimus dorsi muscle was seen. The fat was cleaned and lymph node was removed. Superficial veins to reach

depth of the armpit. The pectoral muscles with the clavipectoral fascia form anterior boundary of the region.

Then blood vessels and nerves were cleaned and identified.



Figure 2: Dissection of axillary fossa.

DISCUSSION

Marma points could have serious negative consequences. At the Marma point, numerous types of muscles (muscular components), vessels (vascular components), bones (sclerous component) ligaments (neuro

connective tissue components) and joints (articular components) converge, acting as a physiological junction.

CLINICAL IMPORTANCE***Femoral triangle***

Swelling in the femoral triangle caused by

- Femoral hernia
- Inflamed/ enlarged lymph nodes
- Abscess
- Lipoma
- Aneurisms of the vessels
- Neuromas
- Muscle tumors
- Psoas abscess, usually arising from TB spine
- Saphena varix

Axillary fossa

- Thoracic outlet syndrome
- Breast cancer
- Lymphoedema
- Brachial plexus injury (Erb's & klumpke paralysis)

CONCLUSION

According to *Sushruta*, *Lohitaksha marma* is found in the urumoole region, we analyse structures as shown in figure 1 and 2 in cadaveric dissection, we found vessels (siras) thus categorised as sira marma. Blood vessels found at this marma lie in an axis, and as circulation of blood occurs here thus it is called *Lohitaksha*.

REFERENCES

1. Sushruta sharir 6/15, Murthy KRS. Susruta samhita. Volume I, II, III. Varanasi, Uttar Pradesh, India: Chaukhambha Orientalia, 2008.
2. *Ashtanga Hridaya Sharira*, Aruna Dutta Tika 4/37, kunte AM, Navre KRS. Astangahridaya - composed by Vagbhata - with the commentaries (sarvangasundara) of arunadatta and ayurvedarasayana of hemadri. Paradkar H (editor). 6th edition. Bombay, India; Pandurang Jawaji; (<https://archive.org/details/ashtangahrdaya/mode/2up>), 1939.
3. Sankhyadhar SC. Raj nighantu - Sri Narhari pandit (English translation with critical commentary). Sankhyadhar D (compiled). Varanasi, Uttar Pradesh, India: Chaukhambha Orientalia, 2017.
4. Sushrut sharir dalhan tika 6/3, Sushruta samhita - shridalhanacharyavirachitaya nibandhasandrahakhyavyakhyaya nidanasthanasya shrigayadasacharyavirachitaya nyayachand rikakhyapanjikavyakhyaya cha samullasita (Sanskrit). Hyderabad, Telangana, India; National Institute of Indian Medical Heritage (Central Council for Research in Ayurveda and Siddha - CCRAS). (<http://niimh.nic.in/ebooks/esushruta/?mod=read>)
5. Bhavaprakash purva khand 3/223, Misra B, Vaisya R. Bhavaprakasa of sribhava misra (including bhavaprakasa nighantu portion) - edited with the 'vidyotini' Hindi commentary, notes and appendix - first part. Varanasi, Uttar Pradesh, India: Chaukhambha Sanskrit Bhawan, 2013.
6. Sharangdhar samhita purva khand 5/39, Srivastava S. Sharngadhar samhita (jiwanprada Hindi commentary). 3rd ed. Varanasi, Uttar Pradesh, India: Chaukhambha Orientalia, 2003.
7. Charak samhita siddi 9/3, Sharma PV. Charaka-samhita (text with English translation). Volume I, II. Varanasi, Uttar Pradesh, India: Chaukhambha Orientalia; [https://www.artofliving.org/in-en/wellness/sri-sri-marma\[1\]](https://www.artofliving.org/in-en/wellness/sri-sri-marma[1]). <https://www.artofliving.org/in-en/wellness/sri-sri-marma>, 2008.
8. Sushruta sharir 6/15, Murthy KRS. Susruta samhita. Volume I, II, III. Varanasi, Uttar Pradesh, India: Chaukhambha Orientalia, 2008.
9. Shastri Ambika datt, sushruta samhita volume 1 Varanasi, chaukhambha Sanskrit sansthan.
10. Ashtanga hridayam, tripathi bramhanand, Delhi, chaukhambha Sanskrit pratisthan.
11. Pathak ashutosh kumar, anatomy of marma, chaukhambha orientalia, Varanasi.
12. Chaurasia's BD, volume 2, CBS publishers & distributors Pvt Ltd.