# Original Research Article

# A critical review of the Kakshadhara marma and its clinical consideration

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#### Abstract

Background: Ayurveda is an ancient health care tradition with historical roots in the Indian subcontinent and has been practiced in India as an alternative medicine system at least 5000 years. Acharya Sushruta is Called as the father of Surgery. He has given more emphasis on the practical knowledge. Marma is one of the unique and important topics discussed in Ayurveda. It is important from surgical point of view, hence called as Shalya Vishyardha. Marma sharir is part of ayurvedic anatomy where in many vital points, parts and organs of the body have been mentioned. The knowledge of these marma help surgeons to protect these parts and conduct surgery with caution, so as functional and structure damage, deformity and death. Marma therapy is an ancient Indian practice whose focus is the manipulation of subtle energy (Prana) in the body for the purpose to support the healing process. There is need to understand the ancient marma science in modern ways. Description of 107 Marma given in Samhita. Out of all the vital points explained, the Kakshadhar marma in the upper limb is selected for the study, kakshadhar mama is Snayu marma according to susharuta and Sira marma according to vagbhata. According to parinama it is Vaikalyakara marma. Aim of our study is to understand anatomical structures of kakshadhara marma and its clinical consideration through literature present in ancient and modern text. Its prognosis after injury is given in the books of Ayurveda as Pakshaghat (paralysis).

Keywods: Kakshadhar marma, Pakshaghat, prana, Vaikalyakara, Snayu, Sira.

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### INTRODUCTION

The concept of Marma persists from Vedic period, but its principles are applicable even today like earlier era. Most of the Ayurvedic Acharyas are of the view that the total number of Marma are 107 in our body. Acharya Charak has focused mainly on Tri Marma- Sira or Murdha (Head region), Hridaya (Heart) and Basti (Urinary bladder). Acharya Charak has said that among all three Marma are

important ones. Thus, he too has accepted that there are more than 3 Marma (107) but has named 3 has more important ones. Acharya Sushruta to has included these three Marma in his 107 Marma. Acharya Vagbhata has explained 107 Marma. Marma is defined as an anatomical site where five structures i.e., Mamsa, Sira, Snayu, Asthi and Sandhi meet together in which particularly Prana stays by nature. In an individual, generally Soma, Maruta, Tejas and satva, raja, tama along with Bhutaatma stay in Marma. If the Mamas are injured, they either can result into death or can cause various disease or deformities which are difficult to cure. Our Acharya described in detail about each Marma in their respective Samhitas. The knowledge of Marma helps surgeons to protect these parts and conduct surgery with caution. An important principle of Marma therapy is quite simple, where a strong blow can cause injury, a mild touch can cause healing and this is the most important principle of Marma massage. When the knowledge of Marma is combined with an ability to both perceive and direct the flow of Prana, Marma Chikitsa

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becomes a powerful tool for influencing the healing of every known condition. Till date Marma therapy is not well known or practiced except by a few practitioners in India. During Marma therapy, an extremely light stimulation of points on the body is applied. This gets rid of obstructions from that vital point and provides physical and psychological recreation and potency. The word Marma is of Sanskrit origin \_Mrin Maranae '. The Sanskrit phrase. - Mrivatae asmin iti Marmal means -there is possibility of death or serious damage to health when these points are got injured. Marma in Sanskrit also means hidden or secret. Marma (vital point) is actually the seat of Prana (life). As Acharya Susruta has stated that Marma points are the juncture on the body where two or more types of tissue meet, such as Mamsa (muscles), Sira (veins, arteries, Dhamani), Snayu (ligaments), Asthi (bones) and Sandhi (joints). For the treatment purpose it is very essential for physician to know anatomy and physiology related to all vital points. In wars warriors used these points as target to easily destroying enemies. To explore the knowledge of Marmas in clinical fields, it is necessary to know the actual structures present at those sites. The direct understanding of these Marma in ancient science was evident, but there were no sufficient techniques to make out their original structural aspect involved. Acharya Dalhan have defined the Marma as - Maryanti iti Marmani", means the spot on the body surface where if any injury or trauma occurs, causes sudden death. So, these points should be protected from any type of injury. Description of 107 Marmas given in Samhita is being classified into 5 types on the basis of structural involvement in it, as 1) Mamsa Marma (muscular vital point), 2) Sira Marma (vascular vital point), (3) Snayu Marma (ligament vital point), 4) Asthi Marma (vital point of bone) and 5) Sandhi Marma (vital energy points of joint). Another classification of Marma is on the basis of aftereffect of injury to Marma these are as follows, 1) Sadhya Pranhara Marma (causing sudden death), 2) Kalantar Pranhara Marma (death after some time), 3) Vishlyaghna Marma (type of Parinam), 4) Vaikalyakara Marma (causing deformity), 5) Rujakar Marma (causing pain) As per classical description: Kakshadhar Marma is such vital region in the part of the body where the upper arm is connected with the trunk i.e., the shoulder joint.

Kaksha means Bahu Moola which are two in number. Kakshadhara Marma is situated between the region of arm and the breast Injury to Kakshadhara Marma will be led to Pakshaghata that is the paralysis of the one side. Kakshadhar Marma falls under Snayu Marma by Acharya Sushrut and sira Marma by Acharya Vagbhata according to structural consideration and Vaikalyakara Marma on the basis of Viddha Lakshana (injury effect) by both Acharya Sushrut and Acharya Vagbhata. The Vaikalyakara Marmas are the points where injury causes structural or functional deformity.

#### MATERIAL AND METHODOLOGY

Available literature regarding Marmas in Ayurvedic text such as Sushruta Samhita, Ashtang Hridayam etc. and modern text such as Cunningham's mannual of practical anatomy, Human anatomy by B.D. Chaurasia. Materials from electronic media and journals related to the subject were reviewed. Literature study- collection of information regarding kakshadhara Marma from ancient texts like Sushruta Samhita, Ashtang Hridyam is done in detail. The information collected from ancient text is co-related to the modern text and conclusion is drawn.

AIMS AND OBJECTS: 1. To analyze and explain the concept of kakshadhara Marma scientifically given in Ayurvedic classics. 2. To find out relation in between Ayurved and Modern applied aspect of kakshadhara Marma 3. The study related to the subject will be beneficial for self-defense and health.

REVIEW, KAKSHADHARA MARMA: There are two kakshadhara Marma. The word Kaksha means Bahumula, related with the armpit. The world Dhara means bearing or holding as the name kakshadhara suggests, this Marma site is located in the region where arm connects to the shoulder with the help of muscles and ligaments. Its stimulation is beneficial in the disorders related to shoulder. As per the description, kakshadhara Marma sthana is lies in between the kaksha and vaksha but as the name indicates it is more related to kaksha. It is situated in the region of the body where the upper arm is connected with the trunk. Any injury to this particular marmasthana will lead to pakshaghatha, that is the paralysis.

Name
Number
Location
Type (according to region)
Type (according to parimana)
Type (according to rachana)
Type (according to parinaama)

Structure involved

Aghataj lakshane

kakshadhara Marma. 02 At axilla Urdhavshakhagat Marma 01 angul praman Snayu (by sushruta), sira (by vagbhata) Vaikalykar marma

Subscapulari, Pectoralis minor, Brachial plexus 2. Axillary artery, Axillary vein, Axillary lymph node Pakshaghat

#### DISCUSSION

Study of kakshadhara marma has been carried out by collecting reference from different Ayurvedic literature and correlate it with modern anatomy text books. The kakshadhara marma lies in the kaksha region, the detail discussion of these points are as follows: Location -As per the available reference from the Samhita, the exact location of kakshadhara marma is mentioned as between kaksha and vaksha, that will be more related to kaksha. The kaksha region refers to root of the arm i.e., the joint which connects the arm to the shoulder known as kaksha sandhi. Vaksha is the region above the hrudaya and below the kantha. It may be considered as the sub clavicular region and the region above breast. The word 'dhara' means bearing or holding. Since it is named as kakshadhara, it is assumed that it holds the kaksha region with the help of muscles and ligaments. So, the location of the marma is in between the chest and kaksha sandhi but nearer to the kaksha sandhi as the name indicates. Specifically, the kakshadhara marmasthana is to be considered just below the clavicle nearer to the kaksha sandhi. The muscles, ligaments, blood vessels and nerves in the sub clavicular and brachial plexus region are related to the kakshadhara marma sthana. Acharya susrutha Marma is defined as an anatomical site where five structures i.e., Mansa, Sira, Snayu, Asthi and Sandhi meet together in which particularly Prana stays by nature.

#### MODERN PERSPECTIVE

Modern perspective practical anatomy of kakshadhar marma is the sub clavicular and shoulder region. The structures falling in the area of kakshadhar marma is observed as follows

Mansa (Muscles)- Pectoralis major and minor, Deltoid, Coracobrachialis, Bicepsbrachi, Subscapularis, Trapezius, Supraspinatus, Infraspinatus, Teres major and minor, triceps brachi. These 10 muscles may be correlated with the concept of Acharya Sushrutha.

Sira (blood vessels and nerves)- Axillary artery and its branches, Axillary vein and its tributaries, infraclavicular part of the brachial plexus Axillary vein, Superior and lateral thoracic artery, thoraco acromial artery, circumflex scapular artery, thoracodorsal artery, anterior and post circumflex humeral artery, suprascapular artery, superficial cervical artery, the descending branch of occipital artery, circumflex scapular artery and dorsal scapular artery. These blood vessels may be compared with the Sira's present in marmasthana. Nerves- Posterior supraclavicular nerves from the third and fourth cervical nerves. Cutaneous branches from the axillary nerve, the cords of the brachial plexus, the axillary nerve, the musculocutaneous nerve, the medial and lateral pectoral nerve and the median nerves observed in the sub clavicular and shoulder region related with the marmasthana.

Snayu (Ligaments)- Glenohumeral ligaments. These are again divided into superior, middle and inferior glenohumeral ligaments. Coracoacromial ligament. Capsular ligament. Acromioclavicular ligament. Transverse humeral ligament. The fascia observed are the deep, the subscapular fascia, the clavipectoral fascia and the supraspinatus fascia. The clavipectoral fascia is a strong fascia situated under cover of the clavicular portion of the pectoralis major. These ligaments may be compared with snavu in the marmasthana.

**Asthi (Bone)-** The humerus, scapula, and clavicle are observed as the bony parts. These bony parts may be compared as Asthi in the marmasthana

Sandhi (Joint)- The glenohumeral joint may be compared as sandhi in the marmasthana. The joint formed is the glenohumeral joint which is the ball and socket variety of the synovial joint.

DISCUSSION ON MARMA VIDHA LAKSHANA - Kakshadhara marma vidha Lakshana is pakshaghatha.

According to Susharuta, Kakshadhara marma is a Snayumarma. The snayu marma vidha lakshana's are ayaama, akshepaka, sthambha, excessive ruja in snayu's, yaanasthanaashakthi and vaikalyatha in anga. According to Vagbhata it is Sira marma and its vidha lakshana are Bahuraktastrvata, Raktkshaya, raktakshsyaat trushna, bhrama, shawsa, moha, uchaki and lastly death occur. According to Parinaama it is a vaikalykara marma and its vidha lakshana are fracture and dislocation, ligament tear, sprain, contracture, adhesion, disability of joint is occurred.

After overlooking the entire description of Kakshadhara Marma there are some important points which is worth to be noticed. Acharya Sushruta has described total 44 Vaikalyakara Marma and Kakshadhara is one among them. Vaikalyakara Marma causes only deformity but while describing the injury results of L of Kakshadhara Marma, death due to loss of blood i.e., hemorrhage has been mentioned by Acharya Sushruta. This really explores the keen vision of Acharya Sushruta. In Sushruta Sharirsthana 6/23 it has been clearly mentioned that Vaikalyakara Marma sometimes cause even death when these are greatly injured.

CLINICAL CONSIDERATION: At this Marma, the predominant anatomical constituent is axillary artery accompanied with axillary vein, Musculo-cutaneous nerve, median nerve and ulnar nerve. An injury damaging nerves alone may cause paralysis. On the other hand, with the implication of axillary artery with nerves may cause wasting too. Fractures of the upper end of the humerus may damage the axillary nerve and circumflex humeral artery. This may cause to a partial paralysis and partial wasting. In upper limb injury to cords of brachial plexus causes paralysis of biceps, and coracobrachialis. Both muscles are

supplied by Musculo-cutaneous nerve. There is sensory loss in the radial side of forearm and loss of flexion of forearm, claw hand and sensory loss on the ulnar side of forearm and hand.

COMPRESSION OF AXILLARY ARTERY: The axillary artery can be compressed against humerus due to injury from bullet or stab wound. In the case of profuse bleeding, it can be compressed against humerus and bleeding can be stop.

ANEURYSM OF THE AXILLARY ARTERY: Aneurysm of the first part of the axillary artery will compress the brachial plexus especially trunks which will lead to pain and loss of sensation in the regions supplied by the compressed nerves. It usually occurs in the baseball pitchers because of their rapid and forceful arm movements 12,13

INJURIES TO THE AXILLARY VEIN: Any trauma in the area of the axilla often involves the axillary vein as its size is large and exposed position. In fully abducted arm, the axillary vein lies anteriorly to the axillary artery. Trauma at proximal part of the axillary vein is particularly dangerous because of profuse bleeding and risk of producing air emboli (air bubbles) in the blood

INJURIES TO THE BRACHIAL PLEXUS: Pain, Loss of sensation, Muscle weakness, Paralysis of some or all of

the muscles of the shoulder and upper limb, Injury to the upper trunk of brachial plexus causes Ebbs paralysis.

#### CONCLUSION

So, by above description it is clear that vessels and nerve both are the anatomical content of this Marma. Axillary vessels, axillary nerve and branches of cord of brachial plexus may be accounted the real contents of this Marma. Death due to profuse bleeding is due to laceration of the blood vessels and paralysis of whole arm is due to injury of branches of cord of brachial plexus.

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