

**A CRITICO ANATOMICAL STUDY OF KURCHA MARMA AND ITS SIGNIFICANCE  
IN AYURVEDA**

**Dr. Debasish Das Adhikary<sup>1\*</sup>, Prof. (Dr.) Chhayakanta Dash<sup>2</sup>, Prof. (Dr.) Pravakar Samal<sup>3</sup> and  
Prof. (Dr.) Alekh Chandra Mohanty<sup>4</sup>**

<sup>1</sup>Assistant Professor, Ph.D. Scholar, Dept. of Rachana Sharir, Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India.

<sup>2</sup>Professor, Dept. of Shalya Tantra, Chandra Shekhar Singh Ayurvedic Sansthan, Kaushambi, UP, India.

<sup>3</sup>Associate Professor, Dept. of Rachana Sharir, Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India.

<sup>4</sup>Professor & HOD, Dept. of Rachana Sharir, Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India.



**\*Corresponding Author: Dr. Debasish Das Adhikary**

Assistant Professor, Ph.D. Scholar, Dept. of Rachana Sharir, Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India.

Article Received on 23/12/2024

Article Revised on 13/01/2025

Article Accepted on 03/02/2025

**ABSTRACT**

Marma is one of the most vital topics in the enormous ocean of Ayurvedic knowledge. It has been widely acknowledged that marma points are the "seats of life". Injuries to these areas may result in excruciating pain, disability, loss of function, and loss of sensation, or even death. Because of this, the ancient texts have made it very clear that these important places must not be harmed, and even when performing surgery, care should be taken to ensure this. In chapter "Pratyekamarmanirdeshyam", Acharya Sushruta has explained "Kurcha" (tendon or aponeurosis) as one of the important part of body and are six in numbers found in Hastha, Pada, Greeva and Medhra. They are two each in Hasta and Pada; while one each in Greeva and Medhra. Out of 107 marmas, 27 are mentioned under the heading of Snayu Marma. Kurcha are among the Snayu marma, located in Shakhas at hasta and pada above Khipra marma. Aim of our study is to find out the appropriate structures related to Kurcha marma by observing and analysing through the cadaveric study and conceptual study through different texts and previous researches.

**KEYWORDS:** Marma, Kurcha, Tendon, Aponeurosis.

**INTRODUCTION**

During the Vedic era, the term "Marma" refers to a mortal place, a susceptible point, a weak or sensitive body portion, a joint or articulation core, or important structures.<sup>[1]</sup> Marma is considered as the body's vital points in Ayurved. It was the science of war that given rise to Marma Vigyana. The Vedas contain numerous references to the attack on Marma Sthana. Marma points were divided into several categories on the basis of structures, includes Mamsa Marma (vital points of muscles), Sira Marma (vital points of vessels), Snayu Marma (vital point of ligaments and tendons), Asthi Marma (vital points of bones), and Sandhi Marma (vital point of joints).<sup>[2]</sup> Under the basis of location Shakhagata Marma, Udaragata Marma, Koshtagata Marma, Prusthagata Marma, Shira-Grevagata Marma.<sup>[3]</sup> On the basis of effect of injury as Sadhya Pranahara Marma, Kalanatra Pranahara Marma, Vishalyagana Marma, Vaikalyakara Marma, Rujakara Marma.<sup>[4]</sup> Out of 107 marma, 27 are mentioned under Snayu Marma.<sup>[5]</sup> In these

Marmas, Kurcha marma are mentioned under Shakhagat Marma, four in number present on both extremities. Kurcha Marma are one of the Vaikalyakara marma.<sup>[6]</sup> Injuries to these areas may result disability or loss of function. So a detailed study on these points of extremities were conducted to explore the hidden knowledge of location and to make the science known to all for proper utility which explained in Ayurveda.

**MATERIAL AND METHODS**

Conceptual Analysis by stating Kurch Marma's most suitable stance based on information gathered from several traditional Ayurvedic scriptures, contemporary commentaries, medical publications, etc.

Cadaveric Study by understand the anatomical structures related of Kurcha Marma, cadaveric study of hand and foot was carried out in the Department of Rachana Sharir, Sri Sri College of Ayurvedic science and research

hospital, Sri Sri University, Cuttack. All the procedures were done by following the Cunningham's dissector.

### AIM AND OBJECTIVES

1. To evaluate the Kurcha Marma site related anatomical structures in contemporary terminology.
2. To conduct a review of the clinical significance of Kurcha Marma as stated in the literature.

### Literary review of Kurcha marma

#### Kurcha

The key terms employed in the context of "Kurcha" are explained in terms of its Nirukti (meaning of the word), Vyutpatti (word development), and translation into modern scientific terminology. Kurcha assumes its name from the root words "kur+chat" according to Sabdakalpadruma. Kurcha are six in numbers. They are found in Hasta, Pada, Greeva and Medhra. They are two each in Hasta and Pada; while one each in Greeva and Medhra.<sup>[4]</sup> In Susruta Samhita it is mentioned as brush like structures.<sup>[5]</sup>

In the Sushruta Samhita, it is referred to as "Kunchika," meaning a brush like structure or "Kunchala."<sup>[6]</sup> In the Ashtang Hridaya, "Kurcha" is used to mean "suchi" (needle), indicating a sharp-ended needle.<sup>[7]</sup> The word "Kurcha" can imply a variety of things according to different definitions, including a peacock's feather, a clump or bundle of something, or a handful of Kusa grass.<sup>[8]</sup> There are six Kurchas in the human body, each with brush-like structures, according to a significant Sushruta Samhita citation. In relation to the Kurcha, Kurcha Marmas are present in Shakhas.

#### Kurcha Marma

Out of 107 marmas, 27 are mentioned under the category of Snayu Marma in structural basis. Kurcha marmas are four in number, located in Shakhas two angul above the Khipra marmas.<sup>[9]</sup> It is one inch distal from wrist joint at the root of the thumb in hand and is 2 inch proximal and ½ inch medial to the center of the sole of foot.<sup>[10,11]</sup> The measurement as per the classical text is Swapanitala kunchita pramana or 4Angula. Acharya Sushrut described due to deep injury to these sites Bhramana and Vepana occurs.<sup>[12]</sup> Vaghat has used the word Kampa instead of Vepana.<sup>[13]</sup> Monier Wil-liam's dictionary has given the word Kampa the meanings of trembling, tremor, shaking, etc., while Vepana has been given the meanings of quivering, trembling, fluttering, etc.

#### Cadaveric Study

Through the study of pertinent Ayurvedic and contemporary texts, the anatomical structure of Kurcha marma was examined. At the dissection hall of the Department of Rachana Sharir, Sri Sri College of Ayurvedic science and research hospital, Sri Sri University, a chosen male cadaver was dissected using a dissection kit over the area thought to be unique to the Kurcha marma with appropriate measurement. The identification on the cadaver was based on findings from the literary study. Detailed dissection was focused on specific anatomical landmarks and the information was obtained.

Internal structures of Kurcha marma in Hasta		
Sl no.	Name of the anatomical structures	Location at Kurcha marma
1.	Tendon of flexor pollicis longus	Palmar surface at the base of distal phalanx of thumb.
2.	Tendon of flexor carpi radialis	Palmar surfaces of the second and third metacarpal bones.
3.	Tendon of extensor pollicis longus	At the base of distal phalanx of thumb on dorso lateral surface.
4.	Tendon of extensor digitorum	At the bases of middle and distal phalanges of medial four fingers on dorsal surface.
5.	Tendon of extensor indicis	Dorsal surface at the base of distal phalanx of index finger.
6.	Tendon of extensor carpi radialis longus	At the base of distal phalanx of thumb, index and middle finger on dorso lateral surface.
7.	Tendon of extensor carpi radialis brevis	On the dorso lateral surface and at the base of index and middle finger deep to the tendon of extensor carpi radialis longus
8.	Branches of radial artery	Superficial palmar branch of radial artery unites with ulna artery and forms deep palmar arch.
9.	Interosseous muscles	In between metacarpal bones
10.	Median Nerve	Branches of Median nerve (Root C5 to T1) at palmar aspect of hand to the tip of thumb to ring finger
11.	Carpometacarpal joint of thumb or Trapeziometacarpal (TMC) joint	Saddle type of synovial joint

Internal structures of Kurcha marma in Pada		
Sl no.	Name of the anatomical structures	Location at Kurcha marma
1.	Plantar aponeurosis	Two longitudinal fasciculi of Plantar aponeurosis attached to toes
2.	Tendon of flexor hallucis longus	Passes from under surface of talus and insertion in greater toe.

3.	Tendon of flexor digitorum brevis	Passes deep to the planter aponeurosis
4.	Tendon of flexor digitorum longus	Passes till tip of the digits of planter aspect
5.	Tendon of extensor digitorum longus	Two branches passes on dorsal aspect of foot to the tip of phalanges
6.	Tendon of extensor digitorum brevis	Two branches passes on dorsal aspect of foot to the base of middle phalanges
7.	Tendon of extensor hallucis longus.	Passes on dorsal aspect of foot to tip of the greater toe.
8.	Lateral and medial head of flexor hallucis brevis	In deep medial aspect of the sole attaches to the two sides of sesamoid bones on proximal phalanx of the great toe
9.	Medial planter nerve	Two branches of medial planter nerves supplied to tip of the great toe on planter aspect of foot
10.	Medial planter artery	Arises from posterior tibial artery
11.	Deep plantar artery	Arises from dorsalis pedis artery (deep branch) supply to phalanx on planter aspect of foot
12.	Dorsalis pedis artery	Supply up to great toe on two sides in dorsal aspect
13.	Superficial and deep fibular nerve	Supply up to the digits on dorsal aspect
14.	Medial planter nerve	Supply up to the digits as common planter digital nerves
15.	Interosseous muscles	Dorsal and planter interosseous muscles, flexor hallucis brevis muscle, Oblique head of Adductor hallucis muscle,

## DISCUSSION

Out of 27 Snayu marma, Kurcha marmas are present on both limbs. According to Acharya Shushrut, Kshipra is located in area between the thumb and index finger (first and second metacarpal bone), and the Pramana of marma is half angula. So, a point for Kshipra Marma is assumed and measures 2 Angula from that point, here the brush like appearance is formed mainly by the tendons. Same as in lower extremity, site of Kurcha Marma is assumed as 2 Angula above the Kshipra Marma. Through conceptual and cadaveric study the superficial and deeper anatomical structures present were analysed. The shape and position, as per mentioned by Ancient Acharyas in our classical texts were correlated with the structures found on the site of Marma through cadaveric study. It is more important to understand the deeper structural anatomy related to the site of Marma. In both Kurcha marmas, briefly it can be said that the muscles, tendons, ligaments and the blood vessels are the major contents of these Marmas. Acharya Sushruta includes this Marma in Snayu Marma. It fits perfect because the contraction and relaxation of related muscles is carried by the Snayu present here. Snayu are the structures as described in Ayurveda classics, are may be correlate with the certain types of tendon or aponeurosis responsible for protection, contraction and relaxation.<sup>[14]</sup> In Kurcha marma points of hasta and pada mainly various different types of muscles and their tendons along with others structures are present. So this point of Marmas is given under Snayu marma on structural basis. Achary Sushrut had also classified it under Vaikalyakara marma according to injury result like deformities and disabilities may be due to presence of various tendons along with others structures inside it.<sup>[15]</sup>

## CONCLUSION

Kurcha marma are located with various anatomical structures within it, but mostly by many tendons resemble the brush like structures. These brush like tendons are passed through these venerable points which

are defined as the complex anatomical sites. Due to deep injury to these points various deformities occurs like trembling, tremor, shaking and unable to walk or hold any objects properly, which are termed as Bhramana and Vepana in ancient Ayurveda literatures.

## REFERENCE

1. Dr. Bhaskar Govind Ghanekar, Sushrut Samhita (Sharir sthana), Meharchand Lachhmandas Publication, Delhi, 1986; Sharirasthana, 6/43, Page no. 202.
2. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/3.
3. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/6.
4. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/17.
5. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/8.
6. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/14.
7. Kaviraja Atrideva Gupta, Ashtanga Hridayam of Vagbhata, Chaukhamba Sanskrit Sansthan, edition 1997, Sutrasthana 26/22.
8. Ayurvediya Shabdakosha, Joshi V, Maharashtra Rajya Sahitay Ani Sanskriti Mandal, Mumbai (1968) and Sanskrit English Dictionary, Sir Monier Williams, M.A., K.C.I.E; Bodon prof. of Sanskrit; Oxford, Motilal Banarsidas Publishers Pvt, Ltd. Delhi (1899).

9. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/25.
10. Prof. Dr Avinash Lele, The lost secrets of Ayurveda Secretes of marma, Chaukhamba Sanskrit Sansthan, Varanasi, 2005, Page no: 41.
11. Prof. Dr Avinash Lele, The lost secrets of Ayurveda Secretes of marma, Chaukhamba Sanskrit Sansthan, Varanasi, 2005, Page no: 52.
12. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/25.
13. Vagbhata. Harisadasivasastri Paradakara Bhisagacarya, editor. Ashtanga Hrudayam with sarvangasundara of arunadatta and ayurvedarasayana of hemadri. Varanasi chaukhambha orientalia; 2005, Page no: 409.
14. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 5/38.
15. Acharya J.T, Sushruta Samhita with Nibandha-sangraha commentary of Dalhanacharya, Chaukhamba Sanskrit Sansthan, Varanasi, 2019, Sharirasthana, 6/31.