

A Study of Adhoshakhagata Marma with special reference to Kshipra Marma

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Abstract

The *Marma* is very important and unique concept of the *Ayurvedic* system of medicine. *Kshipra Marma* is one among the *Adhoshakhagata Marma* and *Kalatarapranahara Marma*. Depending upon the prognosis of the injury, sometimes this *marma* behaves as *Sadhyapranahara*. That's why, it is essential for the surgeon or medical man to have complete acquaintance of the structures present at the site of *Kshipra Marma* while performing surgical procedures like *Shastrakarma (Siravedha)*, *Agni Karma* and *Ksharkarma* and more. In present era, people are very vulnerable to accidental injuries and site of *Kshipra Marma* get injured in most of the cases. To get the proper guidelines for the cure and surgical/medical management of the injury at the location of *kshipra marma*, the structures present at the site of *Kshipra Marma* should be understood properly.

Keywords

Ayurveda, Kalantara pranahara marma, Adhoshakhagata marma, Kshipra marma, Cadaveric dissection



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INTRODUCTION

Marma Vigyana is very imperative and unique concept of *Rachna Sharira*. The word 'Marma' (vital point) and its application exist from the *Vedic* period and its first reference was given in *Rigveda*¹. *Charaka Samhita* is the first documentation which has mentioned *marma* in *samhita* and the detailed description was been made available by *Acharya Sushruta* as he mentioned 107 *Marma* points, their types, numbers, location, *Pramana* (dimension) and *Viddha Lakshana* (traumatic effects). *Marma vigyana* was developed as science of war. There are so many references from *Vedic* and epic period regarding attack on *Marma Sthana* of enemies and protecting one's *Marma* by wearing protectants.

Marma is an anatomical site where confluence of *Mamsa* (muscle), *Sira* (vessel), *Snayu* (tendon), *Sandhi* (joint), *Asthi* (bone) occurs and *Prana* dwells at these sites²; but it is evident from the description of injuries that the traumatic effect or prognosis entirely depends on the predominance of the tissue type at the *Marma*³. *Acharyas* has mentioned various types of 'Marmas' on the basis of their *Sankhya*, *Rachna* and *Pramana* and *Viddha*

Lakshana. Depending upon the *Viddha Lakshana*, 'Marmas', there are 5 types: *Sadhya Pranahara*, *Kalatarapranahara*, *Vishalyaghana*, *Vaikalyakara*, *Rujakara*⁴. *Adhoshakhagata Marma* are 22⁵ in number and out of which, *kshipra marma* gets much more importance. Now a days, the location of this *Marma* is most commonly get injured and any damage to it, can lead to symptoms which may be fatal. So, to acquire the complete knowledge of *Kshipra Marma*, will go through the cadaveric dissection and literary sources to get the information of this *marma*.

Kshipra marma (Adhoshakhagata)

Acharya Sushruta acknowledged it as the first *Marma* under *Sushruta Samhita*. *Kshipra* takes its root from the word 'क्षिप्र' and has been assigned with the synonyms *Seeghra* and *Twarita*⁶. It is two in number (1 in each *Adhoshakha*) and situated in between *Angushta* (big toe) and *Pradeshini Anguli* (second toe)⁷.

Table 1 Showing Panchavidha Classification of Kshipra Marma

Panchavidha classification^{8,9,10,11,12}

Shadanga Adhoshakhagata marma
anusara

Rachna anusara	Snayu marma
Pramana anusara	½ anguli
Parimana anusara	Kalantar pranahara marma
Panchbhuta	Agni+Jala

- Materials –
 1. Available literature regarding *Marmas-Ayurvedic* and modern material.
 2. Two male and one female cadaver.
 3. Dissection kit.

- The *Marmaghata Lakshana* of *Kshipra Marma* is *Marana* (death) ensued by *Akshepa*¹³ and it is *Kalantar Pranahara* in nature.
- If the *Marma- Kshipra* is severed, it may causes excessive haemorrhage with aggravated *vayu* produces severe pain. When the *Marma* site gets pierced, the person will die due to severe pain and haemorrhage like the tree which deteriorates when the roots gets abruptly cutted by a weapon¹⁴. So, this *Marma* can sometimes turn into *Sadhya Pranahara Marma*¹⁵.
- In ancient time, due to lack of improvised method of treatment of sepsis, amputation had been indicated in *Kshipra Marma Abhigata* to prevent further spread of infection to lower extremity.

- Methodology – Study type – observational study
 1. Literature study – collection of information regarding *Kshipra marma* from ancient texts like *Sushruta Samhita*, *Ashtang Hridaya* etc. is done in detail.
 2. Cadaveric study – dissection of two male and one female cadaver is done in dissection hall of department of *Rachna Sharira*, Babe ke Ayurvedic Medical College & Hospital, Daudhar, Moga. At first markings are done on cadaver regarding the position of *Kshipra Marma*, the web space in between the *Angushta* (big toe) and *Pradeshini Anguli* (second toe) explained in ayurvedic texts. Foot region is dissected as per the guidelines given in the Cunningham's manual of practical anatomy. The information collected from literature is correlated with the findings from dissection and conclusion is drawn.

MATERIALS AND METHODOLOGY

For a good interpretation and understanding of *Marma* with respect of the location, there is need of study of anatomy particularly, the area between big toe and second toe.

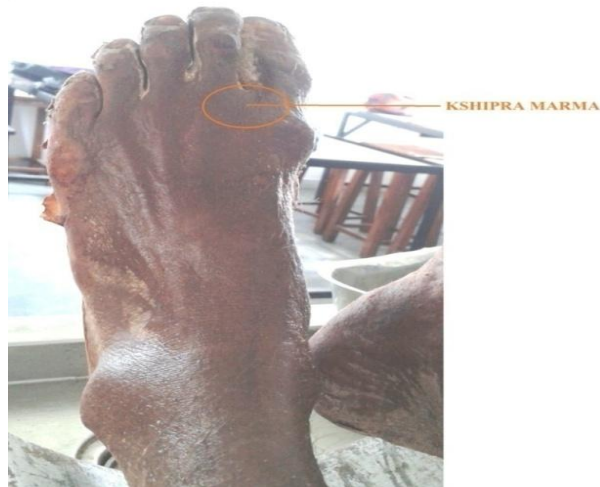


Fig. 1 Showing Location of Kshipra Marma on Cadaver



Fig. 2 Showing Structures of Dorsal Aspect of Foot

Table 2 Showing Anatomical Structures seen at the Site of Kshipra Marma

Mamsa	Sira	Snayu	Asthi	Sandhi
First Dorsal	Dorsalis Pedis	Tendons of Extensor	1 st & 2 nd	1 st & 2 nd Metatarsophalangeal
Lumbrical	Artery & Deep Peroneal Nerve	Hallucis Longus, Extensor Hallucis Brevis, Metatarsal and Intermetatarsal ligament	Metatarsal Bone, Distal Phalange & Sesamoid Bone	Joint

DISCUSSION

Concept of *Marma* is one element of the divine *Ayurvedic* system of medicine and *Kshipra Marma* is *Snayu Marma* as per structural classification. As there is predominance of tendinous structure at the site of this *Marma* which represents the

tissue involved in *Kshipra Marma* (*Snayu Marma*).

The *Marmaghata Lakshana* of *Kshipra Marma* is *Marana* (death) followed by *Akshepa* (convulsions). It is detailed that in *Akshepaka Roga* the aggravated *Vata Dosha* permeates all *Dhamanis* leading to frequent

and repeated convulsions and spasm of muscles^{16,17}. Here the terminology of *Dhamani* has been detailed as *Nadi* by *Acharya Dalhana* suggesting the involvement of nervous system in it and has also mentioned that in this the whole *Akshepa* of the body takes place¹⁸. The presence of dorsalis pedis artery and branch of deep peroneal nerve favour the condition of tetanus as the exotoxins travel through the vasculonervous tissue. The sign of ‘opisthotonus’ (*Dhanurvata*) stated in tetanus is strictly similar to the *Akshepa*. There is severe spasm and convulsions in the individual and these are very much correlated to signs noticed in tetanus.

The first reference of *Kshipra Marma* with respect to its site is very relevant with the historical background of tetanus¹⁹. The incubation period of clostridium tetani is mentioned to be in between 4-14 days which strictly matches with the fact the person injured in *Kalantara Pranahar Marma* will die within 1 week-1 month. This is also the

reason for comparison of *Marmaghata Lakshana* of *Kshipra* with tetanus.

CONCLUSION

Following conclusions has been drawn from the observations obtained during the conceptual and cadaveric study of *Kshipra Marma*.

- The site of *Kshipra Marma* found in between the *Angushta* (big toe) and *Pradeshini Anguli* (second toe) as mentioned in *Sushruta Samhita* and the structures that were seen during dissection were:
 - Based on the *Rachna Anusara Bheda* (structural classification), it is *Snayu Marma*.
 - *Kshipra Marma* is $\frac{1}{2}$ *Anguli* in *Pramana*.
 - Injury to *Kshipra Marma* results in *Marana* due to *Akshepa* which can be compared with tetanus.

Mamsa	Sira	Snayu	Asthi	Sandhi
First dorsal lumbrical	Dorsalis pedis artery & Deep peroneal nerve	Tendons of Extensor hallucis longus, Extensor hallucis brevis	1 st & 2 nd Metatarsal bone, Distal phalange & Sesamoid bone	1 st & 2 nd Metatarsophalangeal joint



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