

**STUDY OF INDRABASTI MARMA IN LOWER EXTREMITY****Dr. Swarup P. Kulkarni^{1*}, Dr. Vishal S. Patil² and Dr. Sharmila S. Naik³**

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ABSTRACT

Marma is very important point in the body. Total number of marmas is 107. Sushrutacharya have explained concept of marma in Sushrut Samhita Sharirsthan 6th adhyaya. Acharya Sushrut has mentioned a range of marma. The arrangement is based on four types by Sushrutacharya. It is given as marmaprakar (types of marma) as per Shadanga, Rachana, Parinam and Pariman. Rachanatmak (Structural) classification of marma is based on five fundamentals as Mansa, Sira, Snayu, Asthi and Sandhi. According to the basic meaning of marma as per Sushrutacharya, the marma is the site where mansa, sira, snayu, asthi and sandhi are collectively present. Indrabasti marma is present in the urdhwashakha (Upper extremity) as well as in adhoshakha (Lower extremity). In lower extremity, it is present at the point, middle of the line, joining the posterior surface of Calcaneus with the centre of the

popliteal fossa. So, it is requisite to see the basic structures as per the definition of marma given by Sushrutacharya with the help of cadaveric dissection method. So this can in point of fact identifies the modern connection of these five basic structures.

KEYWORDS: Marma, Rachanatmak classification, Indrabasti marma in lower extremity.

INTRODUCTION

In Ayurved, a variety of vital points are mentioned which are essential to distinguish. In Rachana Sharir subject, many important concepts related to human body are explained.

Principally in this view, Sushrutacharya has explained this topic in his relevant samhita in Sharirsthan. Amongst all those points, Marma is one of the key aspects. Marma is the indispensable aspect in human body. Sushrutacharya mentioned this sensitivity in Sharirsthan 6th adhyaya. He defines marma as the site in which there is existence of Mansa (muscles), Sira (vessels), Snayu (ligaments/tendons), Asthi (Bones) and Sandhi (Joints).^[1] The unification of all these five structures constitute the marma pradesh. These points are seats of existence. In each marma one of the components is mostly present and others present in traces. Also, arrangement of marma is mentioned under certain categories. Such as types of marma according to Shadang (Location), Rachana (Structure), Pariman (Measurement) and Parinam (Injury results).^[2] Out of this, as per Rachana, above mentioned five types are present. The details of Indrabasti marma are as follows,

Table No 1: Information of Indrabasti marma^[3]

Name of the marma	Indrabasti
Location	Adhoshakha (Lower extremity) at the point, middle of the line, joining the posterior surface of Calcaneus with the centre of the popliteal fossa.
Number	02
Rachanatmak	Mansa marma
Parinam	Kalantarpranhara
Pariman	1/2 anguli (fignure breadth)
Marma viddha laxan	Shonitkshayen maranam (Death due to excessive hemorrhage)

Whereas doing any surgical process, a surgeon must have the basic knowledge of the structures which are present at the operational site.^[4] For this, the information of marma is crucial. So, it is essential to see the five basic structures present in it with the help of modern anatomy by using cadaveric dissection analysis method.

MATERIAL AND METHODOLOGY

MATERIAL

Literary Study

- i. Marma literature available from Ayurvedic and modern texts.

Cadaveric Study

- i. Dead body – 1 male cadaver.
- ii. Instruments – Dissection belongings.

METHODOLOGY

- i. Literary study of Indrabasti marma in lower extremity was done using all the concerned Ayurvedic and modern text books.
- ii. Dissection of selected male cadaver was done with the help of dissection instruments of related to Indrabasti marma (in lower extremity) at the dissection hall of Dr. J. J. Magdum Ayurved Medical College, Jaysingpur, Maharashtra, India.
- iii. From the basis of literary study, identification of Indrabasti marma was done on the cadaver.
- iv. On the basis of proportions given in Samhitas, the area was marked around the Indrabasti marma point.
- v. Detailed analysis was done concerned with the marked points.
- vi. With the help of precise and thorough dissection, related structures of Indrabasti marma in terms of Mansa (muscles), Sira (vessels), Snayu (ligaments/tendons), Asthi (bones) and Sandhi (joints) was recognized as mentioned in hypothesis.
- vii. Concerned elucidation was interrelated with the hypothesis about the Ayurvedic Rachana of Indrabasti marma in lower extremity under the caption of Mansa, Sira, Snayu, Asthi and Sandhi.

RESULTS AND DISCUSSION

RESULTS

Table No. 2: Structures seen at the site of Indrabasti marma during the dissection.^[5, 6, 7]

Sr. No.	Ayurvedic View	Modern Correlation
1	Mansa	Gastrocnemius, Soleus, Plantaris
2	Sira	Posterior Tibial and Peroneal Vessels, Tibial Nerve
3	Snayu	Tendon of Plantaris muscle
4	Asthi	Posterior Surface of Tibia and Fibula
5	Sandhi	No relative comparative structure was found



Photo – 1 – Gastrocnemius Muscle.



Photo – 2 – Soleus Muscle.



Photo – 3- Plantaris Muscle Belly.



Photo -4- Plantaris Muscle Tendon.



Photo – 5- Posterior Tibial Artery.

DISCUSSION

Various references are accessible about the marma by various acharyas. But Sushrutacharya has given more elaborative information about the various marmas. He has given the essential denotation of marma as it is the permutation of Mansa (Muscles), Sira (Vessels), Snayu (Ligaments/Tendons), Asthi (Bones) and Sandhi (Joints). All above five structures are present in each marma. The high quantity of each structure varies in particular marma. Organization of marma is explained as Shadangbhed (Location), Rachana (Structure), Pariman (Measurement) and Parinam (Injury effect). In this study, more emphasis is given on the arrangement of marma as per Rachana (Structure). Indrabasti marma is present in lower

extremity at the point, middle of the line, joining the posterior surface of calcaneus with the centre of the popliteal fossa. It is Kalantarpranahar marma means injury to this marma can produce death within few days. The five relative structures seen during the dissection are as, Mansa - Gastrocnemius, Soleus, Plantaris, Sira - Posterior Tibial and Peroneal Vessels, Tibial Nerve, Snayu - Tendon of Plantaris muscle, Asthi- Posterior Surface of Tibia and Fibula and Sandhi - No relative comparison was found. Along with Indrabasti marma there are other marmas which are called as kalantarpranhar in the lower extremity such as, Kshipra and Talahriday.^[8]

CONCLUSION

Sushrutacharya has specified the information and importance of marmas according to surgical point of view. So, he has given exclusive taxonomy of marmas. Out of one hundred and seven total marmas, thirty three marmas are kalantarpranhar marmas. Six kalantarpranhar marmas are present in the lower extremity. Indrabasti marma represents at the point, middle of the line, joining the posterior surface of Calcaneus with the centre of the popliteal fossa with its related structures as, Gastrocnemius, Soleus, Plantaris, Posterior Tibial and Peroneal Vessels, Tendon of Plantaris muscle, Posterior Surface of Tibia and Fibula.

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