

Anatomical Study of Koorpara Marma Using Cadaveric Dissection Method

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ABSTRACT

Marma is vital point in the body. Total number of marmas is 107. Sushrutacharya have mentioned marma concept in Sharirsthan 6th adhyaya. Vagbhatacharya have also elaborated the concept of marma in Ashtang Hriday sharirsthan 4th adhyaya. Both the aacharyas have mentioned various types of marma. The classification is based on four types by Sushrutacharya. It is given as marmabhed as per Shadanga, Rachana, Parinam and Pariman. Rachanatmak classification of marma is based on five elements as Mansa, Sira, Snayu, Asthi and Sandhi. According to the basic definition of marma as per sushrutacharya in the sixth adhyaya of sharirsthan, the marma is the site where mansa, sira, snayu, asthi and sandhi are collectively present. Koorpara marma is present in the urdhwashakha of sharir in between arm and forearm. So, it is necessary to see the basic components as per the definition of marma given by Sushrutacharya with the help of cadaveric dissection method. So, this can actually identifies the modern correlation of these five basic structures.

Key Words - Marma, Rachanatmak classification, Koorpara marma.

INTRODUCTION

In Ayurved, various basic points are mentioned which are essential to understand. This is important to maintain the health of the individual. In Rachana Sharir, many important concepts related to human body are explained. Particularly in this regard, Acharya Sushrut and Vagbhat have explained different topics in their respective samhitas in Sharirsthan. Amongst all those points, Marma is one of the key aspects.

Marma is the fundamental aspect in human body. Total numbers of marmas are 107. Sushrutacharya mentioned this concept 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 union of all these five structure constitutes the marma sthan.

These points are seats of life. In each marma one of the components is predominantly present and others present in traces. Also, classification of marma is mentioned under certain categories. Such as types of marma according to Shadangbhed (location), Rachana (structure), Praman or Pariman (measurement) and Parinam (injury effect).^[2] Out of this, as per Rachana, above mentioned five types are present. The details of Koorpara marma are as follows,

Table No. – 1 – Information of Koorpara marma^[3]

Name of the marma	Koorpara
Location	Urdhwashakha (Upper extremity) between arm and forearm
Number	02
Rachanatmak	Sandhi marma
Parinam	Vaiklayakara marma (Structural and functional deformity)
Pariman	3 anguli (figure breadth)
Marma viddha laxan	Khanjata (Structural and functional deformity of elbow joint)

Marmas are also called as half part of Shalyatantra. It is because while doing any surgical procedure a surgeon must have the basic knowledge of the structures which are present at the operative site. [4] For this, the knowledge of marma is essential. Koorpara marma (elbow joint) is one of the important joint in the human body for various locomotors. So, it is imperative to see the five basic structures present in it with the help of modern anatomy by using cadaveric dissection method.

MATERIAL AND METHODOLOGY

MATERIAL-

Literary Study –

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

Cadaveric study –

- ii. Cadaver – 1 male cadaver.
- iii. Instruments – Dissection kit.

METHODOLOGY –

- i. Literary study of Koorpara marma 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 Koorpara marma (elbow joint) at the dissection hall of Dr. J. J. Magdum Ayurved Medical College, Jaysingpur, Maharashtra, India.

- iii. From the basis of literary study, identification of Koorpara marma was done on the cadaver.
- iv. On the basis of dimensions given in Samhitas, the area was marked around the Koorpara marma point.
- v. Detailed dissection was done concerned with the marked points.
- vi. With the help of neat and detailed dissection, related structures of Koorpara marma in terms of Mansa (muscles), Sira (vessels), Snayu (ligaments/tendons), Asthi (bones) and Sandhi (joints) was identified as mentioned in hypothesis.
- vii. Concerned observations were correlated with the hypothesis about the Ayurvediya rachana of Koorpara marma under the headings of mamsa, sira, snayu, asthi and sandhi.

RESULTS AND DISCUSSION –

RESULTS -

Table No. – 2 – Structures seen at the site of Koorpara marma during the dissection [5,6]

Sr. No.	Ayurvedic View	Modern Correlation
1	Mansa	Biceps brachi, Triceps brachi, Supinator, Pronator teres and extensor carpi radialis
2	Sira	Brachial artery, tributaries of cephalic and median cubital vein, Median nerve and its branches
3	Snayu	Capsular ligament, radial and ulnar collateral ligaments of elbow joint
4	Asthi	Lower end of Humerus, Upper end of radius and ulna
5	Sandhi	Humero ulnar, Humero radial, superior radio ulnar joint constitutes Elbow Joint



Photo – 1 – Elbow Joint (Koorpara Marma Location)



Photo – 2 – Dissected Elbow Region (Cubital Fossa)



Photo - 3- Brachial Artery



Photo -4- Pronator Teres Muscle



Photo - 5- Median Nerve

DISCUSSION

There are many references available about the marma by various aacharyas. But Sushrutacharya have given more elaborative information about the various marmas. He

has give the basic definition of marma as it is the union of Mansa (muscles), Sira (vessels), Snayu (ligaments/tendons), Asthi (Bones) and Sandhi (Joints). All above five structures are present in each marma. The predominance of each structure varies in respective marma. Out of the five elements, one is predominantly present and others are present in traces. Classification of marmas is explained as Shadangbhed (location), Rachana (structure), Praman or Pariman (measurement) and Parinam (injury effect). In this study, more emphasis is given on the classification of marma as per rachana (structure). Koorpara marma is present in upper limb in between arm and forearm. It is vaikalyakara marma means injury to this marma will produce structural and functional deformity. The site of Koorpara marma is at the elbow joint. The five comparative structures seen during the dissection are as, mansa - Biceps brachi, Triceps brachi, Supinator, Pronator teres and extensor carpi radialis, sira - Brachial artery, tributaries of cephalic and median cubital vein, Median nerve and its branches, snayu - Capsular ligament, radial and ulnar collateral ligaments of elbow joint, asthi - Lower end of Humerus, Upper end of radius and ulna and sandhi - Humero ulnar, Humero radial, superior radio ulnar joint constitutes Elbow Joint. Along with Koorpara marma there are other marmasa which are called as vaikalyakar in the upper extremity such as, Ani, Kurcha, Bahvi, Lohitaksha and Kakshadhar. [7] So, from above discussion it is clear that, half marmas present in the upper extremity are vaikalyakara marmas means injury to them produces structural and functional deformity. So, entirely elbow joint and the structures associated with it can be correlates with the Koorpara marma.

CONCLUSION

Sushrutacharya has given the information and importance of marmas according to shalyatantra (surgical point of view). So, he has given distinctive classification of marmas. Out of 107 total

marmas, 44 marmas are vaikalyakara marmas. 6 vaikalyakara marmas are present in the upper extremity. Koorpara marma represents the elbow joint area along with its related structures as, Biceps brachi, Triceps brachi, Supinator, Pronator teres and extensor carpi radialis muscles, Brachial artery, tributaries of cephalic and median cubital vein, Median nerve and its branches, Capsular ligament, radial and ulnar collateral ligaments of elbow joint, Lower end of Humerus, Upper end of radius and ulna, Humero ulnar, Humero radial, superior radio ulnar joint constitutes Elbow Joint.

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