OBSERVATIONAL STUDY ON KSHIPRA MARMA IN URDHVASHAKHA

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INTRODUCTION

Marma Vidyana was developed as science of war. There are so many references from Vedas regarding attack on marma sthana of enemies and protecting one’s marmas by wearing protectants. Even in today’s fast life, it is very important to protect our marma sthanas because of heavy road traffic which results in accidents causing injury to Marmas. Developing science invents new military armaments increasing severity of injury during war. The description of Marma is specialty of Ayurveda. This is a part of Ayurveda Sharir Shastra. Such a description is not seen in any of the Medical System. Knowledge of marmas exists from very ancient time of Vedas (Holy books). But its development took place from Indus valley civilization to the time period of Acharya Charaka, Sushruta and Vagbhata. Acharya mentioned the total numbers of Marmas are 107. Acharya Sushruta classified marma as Mamsa marma, Sira marma, Snayu marma, Asthi marma and Sandhi marma. Acharya Vagbhata added one or more classification as Dhamani marma respectively. Acharya Vaghbhata described the marma sharir in
4th chapter of Sharirsthan of Ashtang Hridaya. Marma is that place which has unusual throbbing’s and pain on touch. The marmas (vital spots) are so called because they cause death; and they are meeting place of mamsa (muscles), asthi (bones), snayu (tendons), dhmanani (arteries), sira (veins) and sandhi (joints). They are indicated by the predominant structure found in them. There are five types as Sadhyo-pranahara, Kalantarapranhara, Vishalyaghna, Vaikalyakara and Rujakara. According to Shabdakalpadruma, Kshipra takes it from the root word ‘kship’ and has been assigned with the synonyms ‘Sheeghra’ and ‘Twarita’. It is meant as to throw, cast, send, dispatch etc. in Monier William’s Sanskrit – English dictionary. The Kshipra marma is situated in Urdhva Shakha. It is explained as Snaayu (based on the constitution) marma and Kalantarapranhara or Sadyopranhara marma (based on prognosis of injury), total four in number. It is located in between Angushtha (1st metacarpal bone) and Anguli (2nd metacarpal bone). Injury to Kshipra marma results in marana (death) due to akshepaka (convulsions). Arunadatta has detailed that the Akshepaka mentioned here is the Vatavyadhi. It is detailed that in akshepaka roga the aggravated vata dosha permeates all dhmanis leading to frequent & repeated convulsions and spasm of muscles. Here the terminology of dhmanani has been detailed as nadi by Dalhana suggesting the involvement of nervous system in it. Dalhana has also mentioned that in this the whole akshepaka of the body takes place. Arunadatta has interpreted the word ‘Aakshipati’ as ‘Aakramati’ or attacking. It has also been mentioned that when the limbs get severed, the blood vessels get contracted to allow only little hemorrhage and such persons, though having severe affliction, do not die like tree with several branches cut off survives. An effort is taken to elaborate it with the help of available literature and cadaveric dissection to understand the structures present at its site & prognosis of injury to it.

MATERIALS AND METHODOLOGY

Materials –
1. Available literature regarding marmas - Ayurvedic and modern material.
2. Two cadavers – one male, one female.
3. Dissection kit.

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 cadavers (one male and one female) is done in dissection hall of department of Sharira Rachana, ADMAC Ashta. At first markings are done on cadaver regarding the position of Kshipra marma, the web space in between 1st metacarpal (Angushtha) and 2nd metacarpal (Anguli) explained in ayurvedic texts. Hand region is dissected as per the guidelines given in the Cunningham’s manual of practical anatomy and Human anatomy by B. D. Chaurasia. Superficial and deep dissection is done carefully to study the structures present at the marked site.
3. The information collected from literature is correlated to the findings from dissection and conclusion is drawn.

OBSERVATIONS - The site of Kshipra marma is given in Sushruta samhita as – it is situated between thumb and index finger.
Following observations were obtained during the study.

Table 1 – Observations obtained from literature study of *Kakshadhruka marma*

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Features</th>
<th>Sushruta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Numbers</td>
<td>02 (01 in each upper limb)</td>
</tr>
<tr>
<td>2</td>
<td>Type</td>
<td>Śnayu Marma Sadyopranahara / Kalantara Marma</td>
</tr>
<tr>
<td>3</td>
<td>Position</td>
<td>Located in between Angushtha and Anguli</td>
</tr>
<tr>
<td>4</td>
<td>Dimension</td>
<td>½ Angula</td>
</tr>
<tr>
<td>5</td>
<td>Viddha Lakshana</td>
<td>Marana due to Akshepaka</td>
</tr>
</tbody>
</table>

Table 2 – Structures that pass through this region

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Radialis indicis artery</td>
</tr>
<tr>
<td>2</td>
<td>Princeps pollicis artery (interval between the 1st dorsal interosseous &amp; adductor muscle)</td>
</tr>
<tr>
<td>3</td>
<td>Deep branch of radial artery that precedes to form deep palmar arch</td>
</tr>
<tr>
<td>4</td>
<td>Recurrent branch of median nerve which supplies the thenar muscles.</td>
</tr>
<tr>
<td>5</td>
<td>Three proper palmer digital nerves of the lateral branch of the median nerve which supply the skin of both sides of the thumb &amp; radial side of index finger.</td>
</tr>
<tr>
<td>6</td>
<td>First lumbrical</td>
</tr>
<tr>
<td>7</td>
<td>1st palmar interosseoi</td>
</tr>
<tr>
<td>8</td>
<td>Transverse and oblique head of adductor pollicis</td>
</tr>
<tr>
<td>9</td>
<td>Radial bursa</td>
</tr>
<tr>
<td>10</td>
<td>Superficial terminal branch of radial nerve &amp; its dorsal digital branches.</td>
</tr>
</tbody>
</table>

Fig. 1 *Kshipra marma* (Palmar aspect)  
Fig. 2 *Kshipra marma sthan* (Dorsal aspect)  
Fig. 3 anterior view of palm with vessels and nerves  
Fig. 4 deep palmar arch & its branches

**DISCUSSION**

Marmas are the vital points in our body where structures i.e. *Mamsa,*
Asthi, Snayu, Dhamani, Sira and Sandhi meet together. Although it is said that at a time there is simultaneous presence of all structures, sometimes some of the structures are seen to be recessive. Based on the above criteria, the Marmas are placed in different groups and given some special names. The prognosis of injury depends upon the site of injury, depth of injury, force at which the injury is caused etc. Based on prognosis of injury at the site of Marma, they are classified under five headings as Sadyopranahara, Kalantara-pranahara, Vishalyaghna, Vaikalyakara and Rujakara. Each of these words has got a specific meaning indicating the prognosis. It is a snayu marma, kalantarapranhara in nature. It is also mentioned that sometimes the marma can be sadyopranahara. It has also been explained that death will occur due to akshepaka. Acharya Sushruta has mentioned that this marma can be sometimes turn into Sadyopranahara. Akshepaka is one among vatvyadhis mentioned by Sushruta and Vaghbhatta. In akshepaka the vayu entering dhamani will cause severe spasm and convulsions in the individual. More of that the attacks will be frequent. Dalhana has interpreted the dhamani as nadi which possibly indicates the involvement of nervous system in Vyadhi. It has been mentioned that in the Kshipra marma abhighata, there will be severe blood loss which will lead to the Vata prakopa. The convulsions and spasm caused by an injury due to severe blood loss is closely adherent with the similar sign found in tetanus (lock jaw). The sign of ‘Opisthotonos’ mentioned in tetanus is strikingly similar to the akshepaka. The hand and leg are the two main body parts that makes man an efficient being on earth. Our samhitas were written at a time when human life was not mechanized and man had to do all his daily chores like cutting grass, wood etc. with his hand & feet. So they were more exposed to soil & dirt and hence hand had an easy chance to get wounded. The site of marmas in the hand and feet were more susceptible to injury & infection. The methodology of management of sepsis might have been different at the time of Sushruta. So this could be one of the reasons why amputation has been indicated in the Kshipra marma abhighata to prevent further spread of infection to upper limb. Apart from that the incubation period of Clostridium tetani is mentioned to be in between 4 – 14 days which strikingly matches with the fact that the person injured in the Kalantarapranhara marma will die within 15-30 days. There are 20 intrinsic muscles in our hand and Sushruta might have classified most of them as Snayu, due to their small size which led to the classification of Kshipra as a Snayu marma. Since thumb is the master finger, the first web space was given more importance compared to others.

**CONCLUSION:** Following conclusions has been drawn from the observations obtained during the conceptual and cadaveric study of Kshipra marma

- **Kshipra marma sthana** (location) found in between the Angushtha (thumb) and Anguli (index finger), as per Sushruta samhita.
- Based on the structural classification, it is of Snayu marma.
- Injury to Kshipra marma results in Marana due to Akshepaka.
- **Kshipra marma is $\frac{1}{2}$ Angula in dimension.

**REFERENCES**

1. K. R. Srikantha Murthy, Ashtang Hridyam (Sharirasthana), Chapter 4, Citation no. 37, Reprint 2003, Chowkhamba Press, Page no. 427
2. K. R. Srikantha Murthy, Ashtang Hridayam (Sharirasthana), Chapter 4, Citation no. 38, Reprint 2003, Chowkhamba Press, Page no. 427

3. K. R. Srikantha Murthy, Ashtang Hridayam (Sharirasthana), Chapter 4, Citation no. 39, Reprint 2003, Chowkhamba Press, Page no. 427


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