



## A REVIEW ON ANATOMICAL CONSIDERATION OF *RUJAKAR MARMA* THROUGH CADAVER DISSECTION

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### ABSTRACT

As it is well known thing that *Ayurveda* is the science of life, it has peculiar part like *Marma* which shows similar value ability now a days also in modern surgery. According to *Acharya Sushruta*, *Marma* are said to be half part of surgery (*Shalya-vishyardh*). *Marma* are the vital points in our body which possesses *Mamsa* (muscle), *Sira* (vessels), *Snayu* (ligaments, tendons and connective tissue), *Asthi* (bony tissue) and *Sandhi* (joints) combinly. *Marma* are the places where the aliveness (*prana*) is present naturally and specially according to *acharya sushruta*. Total 107 *marma* are explained in *Ayurveda* and *Rujakara marma* is one among the prognostic classification and are eight in number as *Manibandha* (wrist joint) *marma* (two in number), *Gulpha* (ankle joint) *marma* (two in number) and *Kurchashira marma* (four in number); both in upper and lower extremities). *Rujakara marma* are the areas where any injury causes pain and this is due to minimum tissue damage. The study is taken in account to identify the *Rujakar marma* according to site based on underlying anatomical structures through cadaver dissection. The structural and anatomical composition of *Rujakar marma* were reviewed, co-related and analyzed with the knowledge of modern sciences and ayurvedic literature.

**Keywords:** *Marma, Rujakara Marma, Ayurveda*

**INTRODUCTION:** *Marma* are vital points in our body according to different *Acharya*, which should be carefully dealt during surgery & should always be protected from injury, as the component of life or vital energy (*prana*) rest in them<sup>1</sup>. There are total 107 *Marma* in human body. *Acharya Sushruta* has classified according to structures involved (*Rachana bheda*), location present in body (*Shadang bheda*), their dimension (*Anguli pariman bheda*) and effect wise after trauma (*Parinam bheda*). These 107 numbers of *marma* has been structurally presents in human body and classified into five types depending on the

structures involved like *Mamsa, Sira, Snayu, Asthi* and *Sandhi*, while *Astanga hridaya* has classified into six types by including structure like *Dhamani*<sup>2,3</sup>.

*Rujakara marma* is one among the prognostic classification i.e. *parinam bheda* and are eight in number<sup>4</sup>. Among them four are present in *Bahu* in upper limb region, *manibandha* (2) and *kurchashira* (2) and four in *Sakthi* in lower limb region, *Gulpha* (2) and *kurchashira* (2). An injury to this *marma* results in pain (*vedana*) & swelling (*shopha*) of the affected part<sup>5,6,7,9</sup>. *Gulpha marma* is situated at the junction of *pada* (Foot) & *jangha* (Leg). An injury to this *marma* results in pain (*vedana*),

rigidity (*stabdhapadata*) or limping of foot. (*khanjata*)<sup>5,6,9</sup>. *Manibandha marma* is situated at *manibandha sandhi*. Injury to *manibandha* gives rises to *kunthata* i.e. restricted movements<sup>5,8,9</sup>.

#### **MATERIALS AND METHODS:**

All the information on *marma* with reference to *Rujakar marma* was compiled from Sushrut Samhita, Astang Hruday, research papers, journals, previous dissertations and authentic internet sources. Cadaveric dissection was done in the dissection hall of Department of *Rachana Sharir*, in our Department.

#### **Procedure-**

Dissection of *Rujakar marma* were done on cadaver by using dissection kit including scalpel, forceps with help of Cunningham's Manual of Practical Anatomy and B.D Chaurasia's Human

Anatomy for understanding the structural anatomy of *marma*. On the basis of *Ayurvedic* literature related to the *Rujakar marma*, its location i.e. wrist and ankle region was identified on cadaver and circular area of given *Pramana*(dimension) was drawn using scalpel and forceps. With the help of superficial & deep dissection, the structures present at that site were identified. After accessing the proper location of *Rujakar marma*, circular incision is made on skin flap. By retaining the skin flap on respective *marma*, medial incision was taken, leaving the lateral margin intact. With the help of literary & observational study, the location & anatomical structure of *Rujakar marma* were exacted and image photographed.

#### **OBSERVATION & DISCUSSION:**

**Fig. 1: Anterior feature of Wrist**



**Fig.2: Anterior feature of Ankle**



### **Structural anatomy of Rujakara marma-**

According to *Rachana bheda*, *Gulpha* and *Manibandha marma* are *sandhi marma* and *Kurchashira marma* are *snayu marma*. The *Rujakar marma* are predominant in *agni* and *vayu* guna. When there is any injury at the site of *Rujakar marma*, there is loss of *agni* and due to *vayu* causes severe agonising pain<sup>[6]</sup>. Similarly in *Rujakar marmas* the structures lying there are damaged and causes pain. The pain is generally localized but it may spread in whole of the body referring to other sites. Even it may leads to shock.

#### **1. Kurchashira Marma-**

*Kurchshira Marma* is situated below & both sides of *Gulpha sandhi* (ankle joint) and *manibandha sandhi* (wrist joint). An injury to this *marma* results in pain (*vedana*) & swelling (*shopha*) of the affected part.<sup>[51][52][53]</sup> According to *rachana bheda*, it is *snayu marma* and measures one *angula pramana*.<sup>[50]</sup>

#### **Anatomical Structures related to Kurchashira marma-**

**In hand-** Dorsal radiocarpal ligament, Radial collateral ligament, Ulnar collateral ligament, Ulnar artery, Radial artery, Extensor tendons of the wrist and fingers with their synovial sheaths, Inter carpal articulation.

**In foot-** Deltoid ligament, Anterior talofibular ligament, Posterior talofibular ligament, Calcaneofibular ligament, Talocalcaneal ligament, Posterior tibial vessels, Tibial nerve.

Injury on this structures causes severe pain and swelling. In modern this type of symptoms are referred as sprain. This may occur due to any trauma to joint directly or indirectly. Sometimes it is associated with tearing of ligaments, tendons and also synovial membrane are also involved<sup>[10]</sup>.

#### **2. Gulpha Marma –**

*Gulpha marma* is situated at the junction of *pada* (Foot) & *jangha* (Leg). An injury to this *marma* results in pain(*vedana*), rigidity (*stabdhapadata*) or limping of foot (*khanjata*). According to *rachana bheda*, it is *sandhi marma* and it measures two *angula pramana*, mentioned in all *samhitas*.

#### **Anatomical Structures related to Gulpha marma at ankle joint-**

**Bones-** Medial malleolus of tibia, Lateral malleolus of fibula, Talus,

**Ligaments-** Inferior transverse tibiofibular ligament, Deltoid ligament, Lateral ligament.

*Gulpha marma* is related to structures which are involved in the articulation of *gulpha sandhi* i.e. ankle joint. Trauma to this *marma* site causes dislocation, fracture of ankle joint which results in pain, rigidity and paralysis.

#### **3. Manibandha Marma –**

*Manibandha marma* is situated at *manibandha sandhi*. Injury to *manibandha marma* gives rises to *kunthata* i.e. restricted movements. According to *rachana bheda*, it is also a *sandhi marma* and measures two *angula pramana*, mentioned in all *samhitas*

#### **Anatomical Structures related to Manibandha marma at Wrist Joint-**

lower end of radius, scaphoid, lunate, triquetral carpal bones, Radial collateral ligament, Ulnar collateral ligament, Radiocarpal ligament, Ulnocarpal ligament, Median nerve, Ulnar artery.

Injury to this structures causes restricted movement. Fractures of the wrist joint involving the lower end of the radius(Colle's fracture and Smith's fracture) are very common. Fracture of the Scaphoid is also very common<sup>[10]</sup>.

**CONCLUSION:** *Manibandha sandhi* is the region in between the *Prapaani* and *Hasta* of *urdhvasakha* (upper limb). *Manibandha marma* is located at the region of *Manibandha sandhi*. Based on the review of the *Rujakara marma* and the underlying anatomical structures, it can be assumed that *Manibandha marma* is radio carpal as well as distal radioulnar joint and its allied structures presented in *marma vastu*.

*Gulpha sandhi* is the region in between the *pada* (foot) and *Jangha* (leg) of *adhoshakha* (lower limb). Anatomically *Gulpha* is the ankle region of the leg. *Gulpha marma* is located at the region of *Gulpha sandhi*. Based on anatomical structures and the review of the *Rujakara marma*, *Gulpha marma* is talocrural joint and distal tibiofibular joint as well as its allied structures presented in *marma vastu*.

*Kurchashira* of *urdhvasakha* (upper limb) is situated below and on both sides of the *Manibandha sandhi* (wrist joint). The predominance of extensor and flexor tendons passing through the region justifies the classification of this *marma* in the *snayu* variety. Anatomically it includes the midcarpal joint, intercarpal articulations and allied structures. *Kurchashira* of *adhoshakha* (lower limb) is situated below and both sides of *Gulpha sandhi* (ankle joints) and anatomically it includes the Talo-calcaneo-navicular joint and allied structures. The predominance of extensor and flexor tendons passing through the region and presence of apex part of plantar aponeurosis and various retinacula justifies the classification of *Kurchashira marma* in the *snayu* variety.

Thus, the anatomical structure of *Rujakara Marma* is studied in detail with the help of cadaver dissection and *ayurvedic* literature.

## REFERENCES:

1. Kaviraj Dr. Ambikadatt Shastri, *Sushrut Samhita(poorvardh)*, edited with *Ayurveda-tatva-Sandipika, Sharirasthan, Pratyekmarmanirdesh Shariraadhyay*, chapter 6 verse 16, Chaukhamba Sanskrit Pratisthan, 14<sup>th</sup> edition 2003, p.52.
2. Kaviraj Dr. Ambikadatt Shastri, *Sushrut Samhita(poorvardh)*, edited with *Ayurveda-tatva-Sandipika, Sharirasthan, Pratyekmarmanirdesh Shariraadhyay*, chapter 6 verse 3-4, Chaukhamba Sanskrit Pratisthan, 14<sup>th</sup> edition 2003, p.51.
3. Dr. Brahmennand Tripathi, *Astang Hrudayam*, edited with Nirmala Hindi Commentary, *Sharirasthan, Marmavibhag Shariraadhyay*, Chapter 4 verse 42, Chaukhamba Sanskrit Pratisthan, Delhi 2007, p.395.
4. Sashtri A., Editor of *Susruta samhita, Sharira sthana:6/8, Chaukhamba sanskrit sansthan*, Varanasi, 11th Edt, 1997; p-51
5. Dr. Brahmennand Tripathi, *Astang Hrudayam*, edited with Nirmala Hindi Commentary, *Sharirasthan, Marmavibhag Shariraadhyay*, Chapter 4 verse 59, Chaukhamba Sanskrit Pratisthan, Delhi 2007, p.397.
6. Kaviraj Dr. Ambikadatt Shastri, *Sushrut Samhita(poorvardh)*, edited with *Ayurveda-tatva-Sandipika, Sharirasthan, Pratyekmarmanirdesh Shariraadhyay*, chapter 6 verse 25, Chaukhamba Sanskrit Pratisthan, 14<sup>th</sup> edition 2003, p.52.
7. Prof. K. R. Shrikantha Murthy, *Astanga Sangraha of Vagbhata*, volume II, *Sharirasthan*, chapter 7 *Marma Vibhagaadhyay*, verse 3, Chaukhamba Orientalia Varanasi, First Edition 1996, p.90.

8. Prof. K. R. Shrikantha Murthy, *Astanga Sangraha* of Vagbhata, volume II, *Sharirasthan*, chapter 7 *Marma Vibhagaadhyay*, verse 4, Chaukhambha Orientalia Varanasi, First Edition 1996, p.90.
9. Sri. Brahasankara Misra, *Bhavaprakasha* of Shri Bhava Mishra, *Poorvardh*, Edited with The Vidyotini Hindi Commentary, chapter 3 *Garbhaprakaranam*, verse 234, Chaukhambha Sanskrit Sansthan Varanasi, p.72-73.
10. Dalai S, Banjare H, Banjare B. Involvement of structural anatomy with rujakar marma; assessment through cadaver dissection. *International Journal of Research and Review*. 2020; 7(9): 430-437

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