



Conceptual Study of Katikataruna Marma and It's Clinical Significance

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ABSTRACT

Ayurveda has been authentic source of knowledge covering different aspects. *Acharya Sushruta* has contributed to the field of surgery by introducing the concept of *marma* i.e. vital or vulnerable areas of body which we can regard as an ancient traumatology. *Katikataruna* is an *asthimarma*. Extent of vulnerable area is approximately half angula (1cm). *Katikatarunamarma* is classified under *kalantarapranaharamarma*. Injury to this *marma* exhibits death from blood loss and loss of complexion and patient become very debilitated. In this article we will discuss about *katikatarunamarma* in the light of modern anatomy and correlate with vital structures situated in this region. This will help us to establish vulnerability and anatomical – clinical importance of *Katikatarunamarma* once again proving relevance of *Sushruta's* ancient concept of *marma* in this modern age.

Keywords: *Marma, Katikatarunamarma, ilium bone, sacro-iliac joint, sciatic notch, iliac artery and veins*

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INTRODUCTION

Ayurveda has been authentic source of knowledge covering different aspects of life since archaic times. *Ayurveda* deals with knowledge of whole body and widely described by *Acharya* in classical text whose knowledge is important for understanding the structure and function of body which is helpful in diagnosis, treatment and research aspect. The concept of *Marma* persists from *Vedic* period. It is very much old by time frame but its fundamental principles and approach towards life are pertinent even today like earlier era. Concept of *Marma* also given by *Acharya Charak* but has focused mainly on *Tri Marmas (Sira, Hridaya and Basti)* [1]. *Acharya Sushruta & Acharya Vagbhatta* have narrated in detail about each *Marma* in their respective *Sharira Sthana* [2,3]. *Prana* resides in some determined sites of the body such as *hriday, sira, basti* and different joints etc. These lively sites are called *Marma* [4]. The *Marma* term is derived from “*Mri*” *Dhatu* and “*Manin*” *Pratyay* which means any trauma on the *Marma* region may cause loss of function of that organ or site and even death may occur depending upon the site and strength of the trauma [5]. A *Marma* points are the coupling place of several *dhatu*s and *updhatus* such as Muscular tissue that is *Mamsa*, blood vessel that is *Sira*, Systema Nervosa that is *Snayu*, Osseous tissue that is *Asthi* and Joints that is *Sandhi* [6]. *Acharya Vagbhatta* has catalogue *Dhamni Marma* along with them, he also said that these are the place where “*Visham Spandan*” and “*Peeditae Ruk*” is seen [7]. *Acharya Sushruta* has described *Marma* in detail in his text and has considered its knowledge equal to half of the *Shalyatantra's* knowledge (i.e. *Ardhachikitsa*) as his text was the *Shalyapradhan*. So during *shalya karma* these *Marmas* must be kept in intellect to avoid any kind of injury that may lead to dysfunction or death. *Marmas* are also the site of presence of *fridoshas* along with *Satva, Raja* and *tama* [8].

Katikatarunamarma:

Katikataruna word means “what arises from the sacrum”. [9] *Katikatarunamarma* is situated in lower back, one on either sides of vertebral column near bones of the pelvis [10]. *Katikataruna* is an *asthimarma* and extent of vulnerable area is approximately half *angula* (1cm) [11]. In prognostic status, it is

Kalantarapranaharamarma. Injury to this *marma* exhibits death from blood loss and loss of complexion and patient become very debilitated[12].

Anatomical structures:

Dr. *Ramraksha Pathaka*[13] considered following structure

- Posterior aspect of ilium
- Bifurcation of the common iliac artery opposite the lumbo sacral articulation into the external iliac and internal iliac arteries
- Sacro iliac ligament

Dr. *Bhaskar Govind Ghanekara*[14] prefers to take the sciatic notch as *Katikatarunamarma*.

Dr. *Patil*[15] considered follow structure in *katikatarunamarma*:

- Posterior aspect of ilium
- Bifurcation of the common iliac artery opposite the lumbo sacral articulation into the external iliac and hypogastric arteries
- The corresponding iliac veins and Sacro iliac ligament

Dr. *Raghuram*[16] considered fellow structures falling in the area of *Katikatarunamarma*-

- Low back region
- Posterior aspect of ilium bone (both right and left ilium)
- Sacro-iliac joints
- Lumbo-sacral joints (right and left)
- Bifurcation of common iliac artery at the level of lumbo-sacral joint
- Bifurcation of iliac veins at the level of lumbo-sacral joint

Dr. *L.P. Gupta*[17] described following anatomical structures of *KatikatarunaMarma*:-

- Sacro-iliac joint
- Internal iliac blood vessels
- Sciatic nerve

Dr. *A.k. Patahak*[18] suggested that sciatic notch can be considered as *katikatarunamarma*.

Regional Antomy of <i>Katikatarunamarma</i>^[13,14,15,16,17,18]	
<i>Mamsa</i>	Piriformis
<i>Sira</i>	External iliac and internal iliac arteries , corresponding iliac veins
<i>Snayu</i>	Sacro iliac ligament , Sciatic nerve
<i>Asthi</i>	Posterior aspect of ilium bone , Sciatic notch
<i>Sandhi</i>	Sacro-iliac joint

Discussion:

Katikatarunamarma is situated in lower back, one on either sides of vertebral column near bones of the pelvis[19]. *Katikatarunamarma* is an *asthimarma* so *asthi* (bony structure) are dominant structure in this area mainly Posterior aspect of ilium bone, sciatic notch, sacro-iliac joint.

The word *Pratishronikandam* is referred to as *Pratishronikarnou* by *Acharya Dalhana* [19]. This *Shronikarnouis* present on either side above the *Trika (Sacrum)* bone attached to the pelvis. The structure that which resembles the ear in the pelvis is supposed to be auricular surfaces of the both the Ilium & Sacrum bone together forming the sacro-iliac joint. This joint has a peculiarity in the way the cartilages are attached to the articular surfaces of either of the Ilium & Sacrum bones, which can be understood from the following statement of Gray's anatomy, which reads as "The sacroiliac articulation is an amphiarthrodial joint, formed between the auricular surfaces of the sacrum and the ilium. The articular surface of each bone is covered with a thin plate of cartilage, thicker on the sacrum than on the ilium. These cartilaginous plates are in close contact with each other, and to a certain extent are united together by irregular patches of softer fibro cartilage, and at their upper and posterior part by fine interosseousfibers".[20]

Hence, the *taruna* predominance in this particular joint present at the *Katika* region, helps in determining the sacroiliac joint to be considered as the *Katikatarunamarma*.

Acharya Sushruta opines injury to this *marma* exhibits death from blood loss and loss of complexion and patient become very debilitated [21]. External trauma to this area causes pelvic fracture and fractured bone can damage surrounding blood vessels i.e.External iliac and internal iliac arteries, corresponding iliac veins thus causing pelvic hemorrhage which leads to blood loss[21].

External trauma, any physiological or structural change , any pathological change or age related wear and tear can also affects the Sacro iliac joint causing sacroiliitis , lumbago – spondylitis, low back pain etc.[22].

CONCLUSION

Acharya Sushruta and *Vagbhata* described in detail about *Katikatarunamarma*. According to *Acharya Sushruta*, *Katikatarunamarma* is an *asthimarma* and classified under *Kalantarapranaharamarma*. It is half *angula* in measurement and injury to this *marma* exhibits death from blood loss and loss of complexion and patient become very debilitated. Through Above collected data and various views it is established that *katikataruna* can be correlated to mainly bony structure present in pelvic region i.e. Posterior aspect of ilium bone , Sacro-iliac joint , Sciatic notch. Any high energy external trauma i.e. car collision, sudden fall on back can cause pelvic fracture. Pelvic fractures are often associated with severe hemorrhage due to the extensive blood supply to the region which can ultimately leads to the death.

So, the knowledge of *Katikatarunamarma* and its anatomical perspective is very important for us to understand the structure and diagnosis of any injury in this area. This review established the vulnerability and anatomical – clinical importance of *Katikatarunamarma* once again proving relevance of *Sushruta's* ancient concept of *marma* in this modern age.

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