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CONCEPTUAL STUDY OF KRIKATIKA MARMA AND ITS CLINICAL SIGNIFICANCE

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ABSTRACT

There are 107 *Marmas*, which are the body's important places. The *Marmas*, or weak spots of the body where *Prana* lives, according to *Ayurveda*. Any injury to these areas has the potential to significantly reduce energy for the body as a whole or for a particular organ/system, which is a primary cause of mortality. *Krikatika Marma* is one of the *Greevavat Marma*, or *Sandhi Marma*. There are two *Krikatika Marma*, each of which is about one centimeter (half *Angula*) long. Due to the *Chalmurdhata* (loss of head stability) that comes from injury to it, this is classified as a *Vaikalykara* (deformity). As a result, *Krikatika Marma* is among the most crucial *Marmas*. Here's an attempt to explain the concept of *Krikatika Marma*. In this article, we will examine *Krikatika Marma* in the context of contemporary anatomy and compare it to key components located nearby. The vulnerability and anatomical-clinical significance of *Krikatika Marma* will be established, once more demonstrating the applicability of Sushruta's old idea of *Marma* in the present.

Keywords: *Marma, Krikatika Marma, Atlanto occipital joint, Ligaments, and membranes of Atlanto occipital joints, vertebral arteries, and veins*

INTRODUCTION

Ayurveda, a branch of medicine that aims to maintain the balance of the body, mind, and soul in order to promote the optimal state of health, unquestionably has a significant impact on *Marmas'* life. *Ayurveda* reached a new level as a result of the original *Marma* concept and its structure. The body has 107 *Marmas* or important places. Any damage to these regions has the potential to dramatically lower energy levels for the body as a whole or for a specific organ or system, which is a major factor in mortality. An essential section of *Marma* was detailed by *Maharshi Susruta*, a pioneer of surgery, in the *Susruta Samhita's Sharira Sthana* chapter titled "*Pratyeka Marma Nirdeshaniya*." In this chapter, he described *Marma* as a physical component whose tissue content is correlated with its vitality. The junction (assembly) of the *Mansa* area (muscle tissue), *Sira* (blood vessels and nerves), *Snayu* (ligament, tendon, and nerve tissue), *Asthi* (osseous tissue), and *Sandhi* (joints) is what he meant by *Marma* (anatomical area) [1]. They were cataloged by *Acharya Vagbhatta* along with the assertion that "*Visham Spandan*" and "*Peeditae Ruk*" can be seen in *Dhamni Marma* [2].

The three bodily doshas of *Kapha*, *Vata*, and *Pitta*, as well as the three Mahagunas *Satva*, *Raja*, *Tama*, and *Bhutatma*, which are supernatural forces or powers that control

the body and *Mana*, are all located in *Marmas*, according to *Acharya Sushruta* [3]. anatomical classification of *Marmas* is [4]

1. *Mansa*
2. *Sira*
3. *Snayu*
4. *Asthi*
5. *Sandhi*

Classification of *Marma* according to traumatic effects and prognosis are mentioned in *Ayurveda* as follows: [5]

1. *Sadhyapranhar*
2. *Kalantarpranhar*
3. *Vaikalyakara*
4. *Vishalyaghna*
5. *Rujakar*

Krikatika Marma:

Krikatika word means "The joint of the neck" [6]

Location

In the neck region, they are found at the point where the *Shira* (head) and *Greeva* (neck) meet

based on the classical description of *Krikatika Marma* '*Shirogreevyo Sandhane*' [7]

Number – Two [8]

Anatomical site/Surface Anatomy – *Krikatika marma* is present at the junction of the head and neck [9].

Dimension - According to all acharya dimensions of *Krikatika Marma* is

Ardhangula in terms of *Angula Pramana* i.e, half *Angula* [10]

Structural Anatomy - Sandhi Marma [11]

Prognostic Status – Vaikalyakar Marma [12]

Vaikalyakara Marma is the type of *Marma* that results in deformity after an injury. *Soma Guna* makes up the majority of it. The *Jala Dhatu* sustains the *Pranas*, or vital life forces, as a result of the stability or coldness that *Soma Guna* [13].

Injury Results – An injury to this cause *Chalmurdhata* [14] that is the head unfixed or imbalanced.

Anatomical structures:

Dr. Lele [15] considered the following structures

- Atlanto occipital joint
- Occipital and Ist cervical bone(atlas)
- Rectus capitis lateralis
- Rectus capitis anterior

- Anterior and posterior primary ramus nerves

- Vertebral artery and veins

Dr. Ram Raksha Pathak [16] considered the following structure

- Atlanto- occipital membrane
- Lateral Atlanto -occipital ligaments

Acharya Gannath Sen was of the opinion that it is cartilage at the lower side of the larynx, which is in no way in coherence with the traumatic outcome of the *Marma* mentioned by the Acharyas.

Dr. Raghuram [17] considered fellow structures falling in the area of *Krikatika Marma* –

- Atlanto-occipital joint
- Ligaments and membranes of Atlanto occipital joints

Dr. A.k. Pathak [18]s aid that *Krikatika Marma* can be taken as the area over the atlantooccipital and atlantoaxial joint.

Regional Anatomy of <i>Krikatika Marma</i>	
<i>Mamsa</i>	Lateral capitis lateralis, lateral capitis anterior
<i>Sira</i>	Vertebral arteries and veins
<i>Snayu</i>	Alar ligament, Atlanto-occipital ligament, transverse ligament, ligamentum nuchae
<i>Asthi</i>	Occipital bone, the atlas bone
<i>Sandhi</i>	Atlanto-occipital joint

MATERIAL AND METHODS

Literary material will be collected from *Samhita Granthas* and modern books, national and international journals, magazines, seminars, conferences, internet material, previous works done, presented papers, databases, etc.

DISCUSSION

Krikatika Marma is the complicated anatomical structure of the neck that combines crucial stability with a significant amount of movement, the *Marma* is a structure of considerable surgical value. The Atlanto-occipital joint, which is positioned

near the craniocervical junction, contains *Krikatika Marma*. Ligaments are necessary for stabilizing a variety of motions that the craniocervical junction must allow. Excessive neck extension is restrained by the anterior atlantooccipital membrane. At the atlantooccipital joint, the alar ligaments prevent contralateral flexion and axial rotation. *Chalmurdhata* can be classified as having craniocervical instability, which also involves instability of the atlas and occipital region. Injuries to the ligaments that result in dislocation, subluxation, hypermobility, and loss of sense of balance in the head can be the main cause.

Injury to the craniocervical junction can result in instability either directly or indirectly. This instability may be caused by the laxity of ligaments as a direct result of the injury or indirectly by inadequate head position awareness or control. *Vikalata* is a destabilizing malformation that is irreversible. Snayu stabilizers are destroyed to create *Vikalata*. All ligaments, to a greater or lesser extent, contribute to the stability of the craniocervical junction. *Chalmurdhata*, or head instability, can also result from a poor perception of head and neck position and a sense of instability, for example, when the alar ligament is injured. The alar ligaments are the principal stabilizers of the craniocervical junction along with the transverse ligament. Dislocation, subluxation, instability, hypermobility, and

loss of feeling of balance of the head are all included under the term *Chalmurdhata*. This conversation supports *Sushruta's* medical opinion of *Chalmurdhata*, The structure that should be covered by this *Marma* is chosen with the aid of these clinical observational data. The posterior ramus of the C1 vertebral artery, the alar ligament, the anterior and posterior atlantooccipital membranes, and the atlantooccipital joint are among them, all of these components are placed bilaterally inside a circumference of half an *Angula*, which is a very small area. The transverse ligament is the most crucial ligament of all. The integrity of the transverse ligament is frequently taken into consideration when deciding whether to pursue conservative or surgical treatment. The alar ligament is the second-most significant ligament. The atlantooccipital joint can be harmed by external trauma, any physiological or structural alteration, any pathological change, or aging-related wear and tear, which can result in instability of the head.

CONCLUSION

Krikatika Marma was thoroughly described by *Acharya Sushruta* and *Vagbhatta*. *Acharya Sushruta* categorizes *Krikatika Marma* as a *Sandhi Marma* and a *Vaikalyakar Marma*. It is half *Angula* in size, and damage to this *Marma* results in head instability. By combining the aforementioned information with other viewpoints, it has been determined that

Krikatika Marma is related to the atlanto-occipital joint and the ligaments that support it. Any damage to this joint can result in instability. Therefore, understanding *Krikatika Marma* and its anatomical perspective is crucial if we are to comprehend the structure and make a proper diagnosis of any harm to this region. This study confirmed the relevance by establishing the vulnerability and anatomical-clinical significance of *Krikatika Marma*.

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