

## STRUCTURAL CHANGES OBSERVED IN DHOSHABHIGATA OF KRIKATIKA MARMAS – A CASE STUDY

<sup>1</sup>K. B Hiremath

<sup>1</sup>Vice-Principal SJG Ayurvedic Medical College & Hospital, P G Center "Gavimath Campus" Koppal-583231

### ABSTRACT :

The *krikatikamarmas* is one of the *vaikalyakarasandhimarmas*. Any injury to *marmas* leads to *abhigatha* (*doshabhigatha*). In this case study of a patient was having loss of stability of head and neck along with severe pain in the cervical region (*chalamurdata*). These symptoms are almost all same to the *krikatika marma abhigatha*. It was observed & confirmed through MRI report.

**Key words:** *Marmas, doshabhigatha, vaikalyakaramarmas, chalamurdata, dosavayu, soma, MRI.*

### REVIEW OF LITERATURE:

The sensitivity of *Marmas* was explained in most of the ancient *Samhita*'s. It shows that the physician and surgeon should have the knowledge of *Marmas* in their clinical practice. Those who have perfect knowledge of the *Marmasthana*, they will become success in the field of disease management. In this article we have observed the structural changes in *Marmasbhigata* through their signs and symptoms.<sup>1</sup> The *marmas* is to be considered as one of the vital part and it is the location where the presence of five structures, like *mamsa*, *sira*, *snayu*, *asthi*, and *sandhi* are present. That region has very significant in related with the clinical point of view. It is considered as one of the *pranasthana* that means the sensitivity will present in this site, if any internal or external injury to the *Marmasthana* may lead to local deformity. So the knowledge of such *marmasthanas* in the body and related with management of disease is necessity.<sup>2</sup> *Marmas* (vital spots) consist of the aggregate of muscle, blood vessel, ligaments, bone joint in which particularly *pranas*. By nature, stay, that is why injury to *marmas* leads to respective consequences.<sup>3</sup> As per

*Susruta, Marmas* are the vital spots in the body which on injury can lead to deformity or death, which is a broad meaning of the definition. He also says that all such spots do not cause the death; some may cause deformities and severe pain.<sup>4</sup> Most of the ancient *Acharya*'s have explained the same concept in *Marmas Vignana*. *Acharya Susruta* explained 107 *Marmas* in the body and are classified as according to the region and effect etc.

### *Marmas Classifications* -<sup>5</sup>

1. *Marmas* classification as per Regional Anatomy (*Shadangtvam*)
  - a) *Shakagatamarmas* (Upper and Lower limbs) 11X4=44 No
  - b) *Madyamangamarmas* (Trunk) 26 No
  - c) *Jatrurdhvamarmas*(Head&Neck)37 No
2. *Marmas* classification as per effect (*Parinamaanusara*)
  - a) *Sadyapranaahara* 19 No
  - b) *Kalantarpranaahara* 33 No
  - c) *Vishalygna* 03 No
  - d) *Vikalyakara* 44 No
  - e) *Rujakara* 08 No
3. *Marmas* classification as per structure (*Rachananusara*)
  - a) *MamsaMarmas* 11 No
  - b) *SiraMarmas* 41 No

c) <i>SnayuMarmas</i>	27 No
d) <i>AsthiMarmas</i>	08 No
e) <i>SandhiMarmas</i>	20 No
f) <i>Dhamanimarmas</i>	(No 9) (By Acharya Vaghbata)

**Case Study 1:**  
*Krikatika(Vaikalyakar/Sandhi)Marmasbhi gata(Doshabhigatha)*  
 Name – xxx;  
 Place - BasavanaBagevadi  
 Age / sex – 51 y / male  
 MRI No -1171/72;  
 Occupation –labour( Hard weight lifting job)  
 Hospital No – 56491/31/10/2016 (S.J.G Ayurvedic Medical College & Hospital, Koppal)<sup>6</sup>

**Complaints:**

1. Difficulty and restricted movement of neck, Severe pain in the cervical region, pain radiating to the right shoulder joint and right upper limb, numbness in the right hand including fingers, giddiness while walking; pain in the lumbar region

**Anatomical consideration:** At the C3, C4, C5 and C6 vertebrae and inter vertebral disc, inter vertebral joint, including ligaments, spinal nerve roots, spinal blood vessels are involved as per the MRI scan. It is the region of *Krikatika Marmas Sthana*, belonging to *SandhiMarmas* and *VaikalyakarMarmas*.

At the junction of the head & neck two *krikatika marmas* located on either side. Injury to these causes shaking of the head and *chalamurdhata*.<sup>7</sup>

**DESCRIPTION OF KRIKATIKA MARMAS**

**Name:** *Krikatika* (the joint of the neck)

**Number:** 2 *marmas* points (one on each side of the neck)

**Dosha:** *Soma Dosha, (Tamoguna)*

**Type:** joint (*sandhi*)

**Size:**  $\frac{1}{2}$  *anguli* (finger unit)

**Site:** at the junction of the neck and the head, immediately inferior to the external occipital protuberance.

**Controls:** controls the bodily posture , circulation to the head, *Tarpakakapha*(contentment and lubrication to the brain) and *Udanavayu* (upward-moving air that allows us to keep our back and neck straight), as well as the subconscious mind.<sup>8</sup>

**Anatomical structures involved in Krikatikamarmasthana:** Atlanto-occipital joint, occiput and first cervical bone. Anterior longitudinal, anterior and posterior primary ramus nerves, vertebral artery and vein, Rectus capitus lateralis and rectus capitis anterior muscles.

Among the five only two i.e *asthi* and *snayu* are the deformity structures.

Symptoms if injured:-*chalamurdhata*-(loss of stability of head) injury to the joint will lead to limitation of the movement of the head. The dislocation of the joint can cause permanent deformity by pressing on the medulla oblongata.

**Observations of MRI in this case**

1. Alignment normal
2. Cervical disc are partially desiccated
3. Marginal osteophytes noted involving cervical spine
4. Mild narrowing of right neural foramina noted at c3, c4 level causing indentation of exiting nerve root
5. Posterior annular tear with focal disc extrusion noted at c5, c6 level; causing severe compression of the cord.
6. Rest of the vertebral bodies and appendages are normal
7. Sacralisation of L5 vertebra noted
8. Posterior disc herniation noted at L3, L4 level causing thecal sac compression and narrowing of bilateral neural foramina.

9. Cerebral and cerebellar parenchyma shows normal signal

10. Basal ganglia and thalamus are normal, ventricular system normal.<sup>9</sup>



**Fig 1 - C5.C6 Disc Prolapsed**



**Fig 2 -L5. S1 Disc Prolapsed**



**Fig – 3 –Sacralisation of L5**

**DISCUSSION:** The symptoms are mainly related with cervical region with nerve roots of C3 to C6; mainly brachial plexus. The compression of spinal cord and C3, C4 right neural pathway involvement. Herniation of disc and annular tear at C5.C6 level, leads to compression of nerve roots.

The symptoms may appear at the region of neck, shoulder and arm. Pain is also due to

compression of the spinal cord. The giddiness and restricted movement of head is due to nerve tract compression in the region of spinal cord. Cervical disc herniation between the fifth & sixth (C5/6) and the sixth and seventh (C6/7); most often between the C5, C6, symptoms can affect the back of the skull, the neck, shoulder girdle, scapular region, arm, and hand. The nerves of the cervical and brachial plexus

may also be affected. Lumbar disc herniation occur in the lower back, most often between the fourth and fifth lumbar vertebral bodies or between the fifth and the sacrum. Symptoms can affect the lower back, thigh, anal, gluteal region, genital region (via the perineal nerve), and may radiate into the foot or toe.

By the report of MRI it shows that *marmasbhigata* in *krikatikamarmas*, leads to permanent deformity, as it is explained in *krikatikamarmasabhigatajalakshana*.

If the emergently fatal *marmas* is pierced at the end (or) margin, it leads to death after a period of time and produces disability. The disability *marmas*, in such condition produces distress & pain after a certain period while painful *marmas* if injured at the end (or) margin, causes mild pain.<sup>10</sup>

**CONCLUSION:** The symptoms of the patient are relevant in *krikatikamarmasbhigata* as explained in *samhita*. Films of MRI show the structural deformity as in *krikatika marmas*. Due to the involvement of cord and nerve roots there is *Vikalata* in the neck and shoulder region. With help of MRI investigation involvement of C3,4,5,6 nerve roots with spinal cord is clear indication of *Vikalata* at the region of *krikatika Marmas*. Joint, disc, and inter vertebral foramen narrow shows the *Vikalata* of *KrukatiKaMarmasthana*. By all these above points the symptoms and structural observations through MRI strongly suggest that it is a *krikatikamarmasbhigatha* in this case report.

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#### Corresponding Author:

Dr.K.B Hiremath,Vice-Principal SJG Ayurvedic Medical College & Hospital, P G Center "Gavimath Campus" Koppal-583231

Email-kbhiremathphd@gmail.com

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Declared