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# Analysis of structural changes observed in the region of *Kukundara Marma* in patients suffering from Low back ache

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## ABSTRACT

*Kukundara Marma* is a *Prushtagata Sandhi Marma*. Injury to it leads to sensory and motor deficit in the lower limb. It is located in *Jaghanabahirbhaga* on both sides of *Prashtavamsha* indicates the low lumbar region. Joints in between the lower lumbar vertebrae and lumbosacral joint are the structures present in the *Kukundara Marma* region. Lumbosacral trunk is related in this area which gives contribution to sacral plexus. Back pain is symptom where there will be involvement of muscle, ligaments, bones, joints, and nerves. The most common causes include Mechanical, Destructive, Inflammatory, other causes. With the help of Xray and MRI it was noted that out of 100 patients suffering from low back ache and sensory and motor deficit of lower limb 32 patients had Lumbar canal stenosis and 19 patients had Disc herniation.

**Key words:** *Kukundara Marma, Back pain, Lumbar canal stenosis, Disc herniation.*

## INTRODUCTION

*Kukundara Marma* is *Prushtagata Marma* and are two in number. Located on either side of the vertebral column in the low back region.<sup>[1]</sup> *Kukundara Marma* is *Vaikalyakara Marma*. *Viddha Lakshana* enumerated for the same are *Sparshaajnana* (Sensory deficit) and *Chestopaghata* in *Adhakaya* (Motor deficit in the lower limb).<sup>[2]</sup>

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Back pain is a physical discomfort occurring anywhere in the spine or back ranging from mild to disabling. Back pain is a common symptom that affects 60-80% of people in their lives. Back pain is a symptom where there will be involvement of muscle, ligaments, bones, joints and nerves. The most common causes include Mechanical, Destructive, Inflammatory, other causes.<sup>[3]</sup>

Present work was done with an idea of updating concept of *Kukundara Marma Viddha Lakshana* in view of Modern regional anatomy and applied anatomy. Patients complaining of backache and having sensory or motor deficit in the lower limb are considered to rule out the structures involved in that deformity.

## METHOD OF DATA COLLECTION

- 1) Literature regarding the *Kukundara Marma* will be collected from all literary works, books and journals including all published materials on concept related to the subject.

- 2) Special case proforma was prepared for assessing the *Viddha Lakshanas* of *Kukundara Marma*.
- 3) Assessment of range of movements were done through SLR, Bregards, coin pick, Lesegue test and sensory examinations.
- 4) Screening of 100 patients suffering from Back pain with motor or sensory deficits in the lower limb are selected from IPD and OPD of S.D.M. Ayurveda Hospital, Udupi and other Hospitals.

## DISCUSSION

### On location

By observing the structural changes observed in the *Kukundara Marma Viddha* patients, location can be considered as the lower lumbar region (L4, L5) which is related with the lumbosacral trunk of sacral plexus.

### On Marma Vastu

*Kukundara Marma* is a *Sandhi Marma* which can be correlated with the intervertebral joints of lower lumbar region and lumbosacral joint.

### On age group

Among 100 patients suffering from low back ache maximum number of patients i.e., 44% were of the age group 36-45 years. Which indicates *Vata Dosha Vriddhi* occurs after the middle age.

### On occupation

Among 100 patients 59% of patients were doing heavy work. Heavy work leads to *Vata Dosha Vriddhi* and *Asthi Dhatu Kshaya*.

### On nature of work

Among 100 patients 35% patients were working in sitting posture. Abnormal posture is one of the causes for *Vata Dosha Vriddhi* leading to *Asthi Dhatu Kshaya*.

### On tenderness

Among 100 patients 95% patient had tenderness in the region of low back which indicates important symptom of *Vata Dosha Vriddhi* and *Samanya Marma Viddha Lakshana*.

### On Area of pain

Among 100 patients 63% patients had localised pain as the structural deformity was limited to the *Marma* region.

### On Straight leg raise test

Among 100 patients 95% patients were positive in SLR test which indicates the motor deficit of lower limb as explained in *Kukundara Marma Viddha Lakshana*.

### On Lesegue test

Among 100 patients 84% patients were positive in Lesegue test which indicates the motor deficit of lower limb as explained in *Kukundara Marma Viddha Lakshana*.

### On Bregards test

Among 100 patients 95% patients were positive in Bregards test which indicates the motor deficit of lower limb as explained in *Kukundara Marma Viddha Lakshana*.

### On Sensation

Among 100 patients 70% patients had impaired sensation in the lower limb which indicates sensory deficit as observed in *Kukundara Marma Viddha Lakshana*.

### On Movements

Among 100 patients 65% patient had restricted flexion, extension, rotation movements which indicates the motor deficit as observed in *Kukundara Marma Viddha Lakshana*.

### On Diagnosis

Among 100 patients 32% patient had lumbar canal stenosis which leads to compression of the nerves of sacral plexus leading to motor and sensory deficit as explained in *Kukundara Marma Viddha Lakshana*.

### On Imaging techniques

Among 100 patients 63% patients' structural changes were ruled out with the help of MRI. Hence MRI is more suitable to diagnose the *Kukundara Marma Viddha Lakshana*.

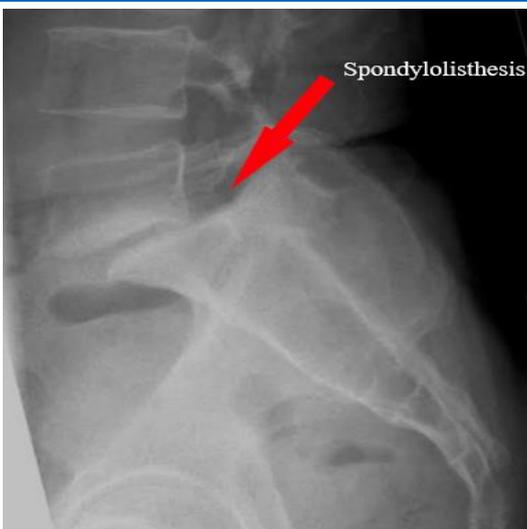
## CONCLUSION

*Kukundara Marma* is located in the *Jaghanabahirbhaga* on both the sides of *Prashtavamsha*. *Jaghanabahirbhaga* can be considered as the hind part of lumbar region.

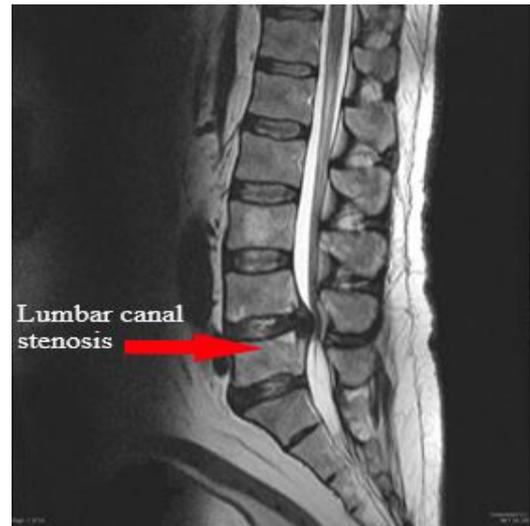
*Kukundara Marma* is a *Sandhi Marma* which can be correlated to the intervertebral joint and the lumbosacral joint of the vertebral column. Injury to the *Kukundara Marma* causes loss of sensation and movement in the lower extremity which can be observed in patients suffering from low back pain in conditions like lumbar canal stenosis, lumbar disc herniation, etc. Loss of sensation and movement in the lower extremity indicates the involvement of sacral plexus in *Kukundara Marma Viddha Lakshana*. Lumbar canal stenosis followed by disc herniation are the main structural changes observed in the *Kukundara Marma Viddha Lakshana*.



**Pic. 1: Intervertebral disc prolapse**



**Pic. 2: Spondylolisthesis**



**Pic. 3: Lumbar canal stenosis**

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