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## A Case of Lumbar Disk Disease with Spondylolisthesis Successfully Managed by *Siravedha*: A Case Report

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### ABSTRACT

Disk-related complaints, particularly Low back pain are very common. Once in a life time all of us suffer from symptoms related to degenerative changes of the intervertebral disc disease. Back pain is second only to the common cold as the most frequent reason for visiting a physician and is the most common chronic pain syndrome in industrialized countries. It is mostly a self limited illness. As per the report of WHO, Low back pain (LBP) constituted 37% of all occupational risk factors which occupies first rank among the disease complications caused by work. The lifetime prevalence of non-specific (common) low back pain is estimated at 60% to 70% in industrialized countries (one-year prevalence 15% to 45% , adult incidence 5% per year). Prevalence increases and peaks between the ages of 35 and 55 years. The present article deals with a case diagnosed as Lumbar Disk Disease with Spondylolisthesis of L5 over S1 and was advised for surgery. The *Ayurvedic* diagnosis was made *Kati graha* on the basis of their symptoms harmonizing with the disease. Oswestry disability index (ODI) score and Verbal rating scale (VRS) was adopted for pain before and after the treatment. Before treatment, Patient was wheel chair dependent and not able to walk even 4-5 steps due to severe pain. After treatment, patient showed improvement of 37.77 % on Oswestry disability index and 40% on Verbal rating scale. *Acharya Sushruta* stated that *Siravedha* is accepted as half of the therapeutic measures in *Shalya tantra* like *Basti* in *Kayachikitsa* and a superior therapeutic procedure among others as it gives instant relief.

### KEYWORDS

*Lumbar disk disease, Spondylolisthesis, Katigraha, Oswestry disability index, Verbal pain intensity scale*



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## INTRODUCTION

This disorder is a common cause of chronic or recurrent Low back and Leg pain. Disk disease is most likely to occur at the L4-L5 and L5-S1 levels, but upper lumbar levels are involved occasionally<sup>1</sup>. The point prevalence of back pain is 35% i.e. 35% of individual will state that they are experiencing Back pain on the day they are questioned, and its annual prevalence is 70%. Back pain is thus at or near the top of the list in all statistical studies of human ailments ranked by frequency. The first serious illness requiring medical help in adulthood is usually a musculoskeletal illness, most often involving the spine<sup>2</sup>. There is no single form of therapy that is effective for all forms of Back pain. It is managed conservatively by the administration of Analgesics, NSAID'S, muscle relaxant including tricyclic antidepressants, physical modalities like heat therapy etc<sup>3</sup>. Surgical therapy is considered when medical therapy does not relieve pain sufficiently to allow for activities of daily living<sup>4</sup>. Between 65-80% of patients treated surgically experience greater than 75% relief of Back and Leg pain. Upto 25% develop recurrent Stenosis at the same spinal level or an adjacent level, 5 yrs after the initial recurrent symptoms

usually respond to a second surgical decompression<sup>5</sup>. One previous study correlated Lumbar Spondylosis (LS) with 'Kati vata'<sup>6</sup>, 'Katigraha' explained as a separate disease in *Ayurvedic* classical text 'Gada nigraha' can be correlated with LS because of similarity in clinical manifestation and pathogenesis of both conditions. LS is defined broadly as degenerative condition affecting the disc, vertebral bodies and associated joints of the Lumbar spine<sup>7</sup>. It is a significant challenge to treat because patients are more prone to further problems after surgery. A convincing treatment approach is available in *Ayurveda* for this disease. Most of the cases of lumbar disk disease are common in *Ayurvedic* practice and this case was also challenging as the patient was bed ridden at the time of admission and having worst pain when he came for *Ayurvedic* treatment as a last option and to avoid surgery. Here, the case of Lumbar disk disease with Spondylolisthesis of L5 over S1 diagnosed 'Katigraha' according to *Ayurveda*. Written informed consent was procured from the patient for the publication of this case report.

## CASE DISCUSSION

A 45 years aged male patient residing at Bhopal, Madhya Pradesh. He visited at



Pt.Khushilal Sharma Govt.Ayurveda college, Bhopal, Madhya Pradesh, India on 1/12/16 with the complaints of Pain in Low back radiating to both the legs with tingling sensation, restricted movements of the lower limb, heaviness, stiffness. Patient was unable to walk, stand and do his daily routine activities without any support due to severe pain. The problem started 3 months back from the date of 1/12/16 and then gradually increasing in severity and pain. He also complained that the low back pain radiated from back of the thigh, gluteal region and then legs with severe intensity. The pain increases while moving and decreases in rest or in supine position. There was no past history of any trauma and surgery. No any family member suffered from similar problem. He was often to take 150-180 ml alcohol 2-3 times in a month and 3-4 cigarette per day for 10-12 years. Patient took Allopathic treatment and got temporary relief in pain but after sometime again low back pain occurred. He was advised for surgery but he didn't consent for surgery and he kept on taking pain killers for pain relief. At the time of examination, patient came by wheel chair with severe pain. Palpation revealed tenderness at calf region and muscle spasm were noted at back of the thighs during movement of hips.

Range of motion was restricted (flexion, extension, abduction, adduction etc.) at hip and both of the knee joints. Tingling sensation was noted and no bowel/bladder incontinence were reported. Haematological reports (Hb%,TLC,DLC,ESR) were within normal limits. FBS was 107 mg/dl and PPBS was 118 mg/dl was found. MRI scan of LS-Spine revealed Anterolisthesis of L5 over S1, changes of dessication seen in L4-L5 disc with central and Rt.paracentral herniation and inferior migration of the disc compressing the Cauda equina and Rt.foraminal nerve root (28/11/16).

## DIAGNOSIS AND ASSESSMENT

Lumbar disk disease with Spondylolisthesis was diagnosed by the presence of pain, stiffness, tingling sensation, restricted movements of the lower limb and by MRI scan findings like changes of dessication seen in L4-L5 disc with central and Rt.paracentral herniation and inferior migration of the disc compressing the Cauda equina and Rt.foraminal nerve root with Anterolisthesis of L5 over S1. A criteria of assessment was based on the Oswestry disability index (ODI) and Verbal rating scale (VRS) questionnaire. The Oswestry Disability Index (also known as the Oswestry Low Back Pain Disability



Questionnaire) is an extremely important tool to measure a patient's permanent functional disability. The test is considered the 'gold standard' of low back functional outcome tools. This is composed of 10 sections (Questions). Each question is rated on 6 points (0-5) scale measuring activities like personal care, sleep, social life etc. Verbal rating scale (VRS) is recommended for the assessment of pain intensity. This scale rated on 6 points (0-5) measuring no pain to worst possible pain. Total two assessments were carried out before treatment and at the time of discharge on both of these scales.

## TREATMENT

- All the investigations which are required i.e. CBP, ESR, BT, CT, Blood sugar level and HIV test were carried out before *Siravedha*.
- Patient was advised to take *Yavagu* or light liquid diet before 1-2 hrs of the procedure.
- Blood pressure was monitored regularly.
- Locally *Abhyanga* on the affected leg from *Kati Pradesh* to *Pada paryanta* with *Tila taila* followed by *Nadi Sweda* was administered.
- *Siravedha* procedure was completed with the help of Scalp vein (18 no.) on the middle

finger 4 *angulas* above or below the *Janu Sandhi* (Table 1).

• **Table 1** Intervention

Date	Sitting	Amount of Blood Letted Out
31/12/16	1 <sup>st</sup>	35 ml.
7/1/17	2 <sup>nd</sup>	40 ml.
14/1/17	3 <sup>rd</sup>	62 ml.
21/1/17	4 <sup>th</sup>	75 ml.

## DISCUSSION

The patient had complained with Severe pain in low back radiating to lower limb, restricted movements of the lower limb, heaviness in lower limbs especially calf region and sluggishness. So the initial diagnosis of *Vata vyadhi* was made on the basis of these symptoms because these symptoms are resembles with the *Kapha-pitta avaratta Vyana vayu* i.e. *Vedana, Gatravikshepa, Guruta, Klama*<sup>8</sup>. Hence, the *Siravedha* is predominantly indicated in *Pitta, Rakta, Kapha Vyadhies* or when *Pitta or Kapha* is in *anubandha* to *Vata Dosha*. In such condition, *Vata* vitiate due to *Kapha* and *Pitta avarana*. *Siravedha* can help to allow the proper *gati* of vitiated *Vata* and to remove the *avarana* of *Pitta* and *Kapha Dosha* that indirectly cure the *Vatik* symptoms along with symptoms produced by *Kapha Dosha*. Renin-angiotensin system can be activated by *Siravedha* that may prevent the accumulation of lactic acid and blood drain out from the compressed part



with enhanced aerobic metabolism. Neuropathic pain is produced by inflammatory mediator Bradykinin and Substance P due to peripheral and central sensitization respectively. Angiotensin converting enzyme (ACE) is found in lung capillaries which degrades these inflammatory mediators Bradykinin and Substance P. Hormones also released like Serotonin which are believed to cause pre-synaptic and post-synaptic inhibition avoiding pain<sup>9</sup>. Thus, there may be the significant reduction of pain. *Siravedha* was done at the interval of 1 week for 4 weeks. After 4 weeks, patient got relief in pain, lightness in lower limb, proper movements of the lower limbs and he was able to stand, walk and do his regular activities without any support. During follow up, patient reported relief in pain at low back and lower limb. Before treatment, total score on Oswestry disability index (ODI) was 93.33% which was reduced to 35.55% at the time of discharge. On Verbal rating scale (VRS) was 80% which was reduced to 40 % at the time of discharge. Patient showed improvement of 37.77% on ODI and 40% on VRS. Better improvement was observed in the sections like Pain intensity, Personal care, Walking, Sitting, Standing, Sleeping on ODI. *Ayurvedic Panchakarma* procedure

can give better results in case of Lumbar disk disease.

## CONCLUSION

This case report showed that the Lumbar disk disease with Spondylolisthesis was successfully managed by *Siravedha*. The effect of *Siravedha* in the management of pain in Lumbar disk disease with Spondylolisthesis. The percentage relief of pain was 37.77% on ODI and 40% improvement on VRS. Thus, the report propound that *Siravedha* is auspicious for managing the Lumbar disk disease with Spondylolisthesis. Patient advised for surgery to manage Lumbar disk disease with Spondylolisthesis can give better results with *Ayurvedic Panchakarma* procedures. Further randomized controlled trials with large sample are required to substantiate the present findings.



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