



**Case Study**

**MANAGEMENT OF LUMBAR DISC HERNIATION WITH RADICULOPATHY THROUGH  
AYURVEDA - A CASE STUDY**

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**ABSTRACT**

Lumbar disc herniation is a major health problem, affecting the most productive population globally. It has closest resemblance with *Gridhrasi* mentioned in Ayurvedic classics. Treatments available in conventional sciences have limitations such as relapse of acute episodes. Here an effort was made to treat a case of L5-S1 disc extrusion with radiculopathy using a comprehensive Ayurveda treatment protocol. The protocol includes a set of treatment procedures along with certain internal medicines. Changes were analysed with the help of VAS scale, SLRT and Oswestry disability index and showed significant improvements. This case is an evidence to demonstrate the effectiveness of Ayurveda treatments in case of LDH with radiculopathy.

**INTRODUCTION**

Nearly 80% of population sustains an episode of low back ache once during their lifetime, and the most common cause is Lumbar disc herniation<sup>[1]</sup>. According to North American Spine Society (NASS), lumbar disc herniation with radiculopathy is defined as the localized displacement of disc material beyond the margins of intervertebral disc space, resulting in pain, weakness or numbness in a myotomal or dermatomal distribution. Lumbar disc herniation is relatively common condition with 5 to 20 cases per 1000 adults annually and is most common in the third to the fifth decade of life, with a male to female ratio of 2:1<sup>[2]</sup>. Modern treatment modalities include use of anti-inflammatory drugs, analgesics, physiotherapy, epidural steroid injections, and surgery. Even after surgery, there are high chances of recurrence (5-15%)

Based on the cardinal features, LDH with radiculopathy can be paralleled with the disease *Gridhrasi* mentioned in Ayurvedic treatises. Due to persisting severe pain, the patient has a typical gait i.e., slightly tilted towards the affected side and affected leg in flexed position and another leg extended which

resembles with that of vulture. According to Acharya Charaka, the classical symptoms of *Gridhrasi* are pain, stiffness, pricking or pulsatile sensation starting from the gluteal region then progressing to the waist, back, thigh, lower leg, and foot<sup>[3]</sup>. Various treatment modalities are explained in Ayurveda for the management of *Gridhrasi*, which includes general *Vatavyadhi* treatment and specific treatments for *Gridhrasi*.

**Patient information:** A 33 year old female patient visited OPD of Department of Shalyathantra, Government Ayurveda College, Trivandrum, with complaints of severe low back pain radiating to left lower limb associated with numbness and tingling sensation. The pain was severe, agonizing in nature and the patient was not able to walk without support. She had a history of fall 2 years back, after which the pain developed. Initially the pain was restricted to low back only and she managed it with allopathic treatment. But intensity of pain increased since past 3 months and she was unable to perform even routine activities. On worsening of symptoms she consulted an orthopedic surgeon, took MRI and was advised to undergo surgery. As she was unwilling for the surgery, she consulted at Shalyathantra OPD for Ayurveda management.

**Clinical Findings**

**Palpation:** Grade II tenderness at L4 - L5, L5-S1 level

**SLR:** Positive (left) at 20°

**Lassegues test:** Positive – left leg

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**Investigations (MRI Lumbosacral spine dated on 28 July 2021)**

- Diffuse disc bulge with central, left posterolateral broad based disc extrusion, left posterolateral annular fissure and bilateral facet joint hypertrophy at L4-L5, causing asymmetric spinal

canal narrowing, bilateral recess and neural foraminal narrowing (L> R), impinging on the left traversing nerve roots and abutting the right traversing and bilateral exiting nerve roots.

- Bilateral facet joint hypertrophy and ligamentum flavum thickening from L1 - L5.

**Treatment protocol****Table no: 1 Treatment procedures**

| Sl. No | Treatment procedure  | Medicines used  | Duration  |
|--------|----------------------|---|-----------|
| 1.     | Bandhana & Traction  | Murivenna   | 7 days    |
| 2.     | Accha Snehapana      | Gugguluthikthakam ghritham  | 3 -7 days |
| 3.     | Abhyanga, Ushmasweda | Sahacharadi thailam   | 3days     |
| 4.     | Virechana            | Gandharva erandam   | 1 day     |
| 5.     | Peyadikrama          | -   | 3/5/7days |
| 6.     | Kayasekam            | Dhanwantharam thailam   | 7days     |
| 7.     | Vaitharana vasthi    | Amlika - 60g<br>Guda - 30g<br>Saindhavam -15gm<br>Sahacharadi thailam mezhuku pakam - 120ml<br>Ksheeram - 240ml | 7 days    |

**Table no: 2 Internal medicines**

| S. No. | Name of medicine               | Dose                 | Time                             |
|--------|--------------------------------|----------------------|----------------------------------|
| 1.     | Vaiswanara churnam             | 5gm - 0 - 5gm        | Before food                      |
| 2.     | Gandharva hasthadi kashayam    | 60ml - 0 - 60ml      | Before food                      |
| 3.     | Sahacharadi kashayam           | 60ml - 0 - 60ml      | After food                       |
| 4.     | Yogaraja guggulu               | 1- 0-1               | With Gandharva hasthadi kashayam |
| 5.     | Sahacharadi thailam 21 Avarthi | 15 drops -0-15 drops | With Sahacharadi kashayam        |

**OBSERVATION AND RESULT****Table no: 3**

| S.No. | Assessment criteria | Before treatment | After completion of treatment Protocol | After follow up of 1 month |
|-------|---------------------|------------------|--|----------------------------|
| 1.    | VAS score           | 9                | 2                                      | 0                          |
| 3.    | SLR degree          | 20° ( left )     | 70°                                    | 90°                        |
| 4.    | ODI score           | 58%              | 18 %                                   | 16%                        |

**DISCUSSION**

The treatment protocol is formulated considering *Gridhrasi chikithsa suthra* of Acharya Chakradatha and general treatment principles of *Vatha vyadhi*. As per Acharya Chakradatha, treatment principles of *Gridhrasi* include, initial *Deepana Pachana*, *Shodhana Karma* and finally *Vasthikarma*<sup>[4]</sup>.

**Probable Mode of Action**

**Bandhana** - As debilitating pain is the main symptom, measures to reduce pain and enabling the patient to withstand further treatment procedure is of utmost importance. Hence, *Bandhana* with *Murivenna* was opted as first line of treatment. *Bandhana* provides

*Asthi Sthiryatha* and *Murivenna* has potent anti inflammatory properties.

**Pelvic Traction:** Helps in nerve root decompression, widening of inter vertebral joints, and creation of vacuum to reduce disc herniation. It also has role in relaxing muscle spasm. Complete bed rest was advised in supine position with hips and knees flexed to moderate degree to relieve tension on nerve roots. Inter vertebral pressure can be reduced significantly in this position.

**Snehapana and Virechana** - *Gridhrasi* being a *Shoola Pradhana Vatha Vyadhi*, *Accha Snehapana* and *Snigdha Virechana Karma* was opted. *Charakacharya* has

mentioned *Mridu Snehana* and *Virechana* in *Vatha Vyadhi*. *Guggulu thikthakam gritham* was opted for *Snehapana*, as it is indicated in *Vatha Vyadhi* and *Sandhi Majjagatha Vatha*. *Abhyanga* was done with *Sahacharadi Thailam* which has indication as *Krichra Anilamaya* and is practically found to be very effective in radicular pain to lower limbs. *Gandharva eranda thailam* was selected for *Virechana Karma*. *Acharya Vagbhata* has mentioned use of *Eranda Thailam* in painful inflammatory conditions of low back.

**Kayasekam:** *Snehana* and *Swedana* is the prime treatment principle for all *Vatha Vyadhis*. *Kayasekam* is a special Kerala *pachakarma* procedure which provides simultaneous *Snehana* and *Swedana* actions. Here, *Kayasekam* was performed with *Dhanwantharam Thailam* which is *Sarva vatha vikaranuth*. *Balya* and *Brumhana* properties of the ingredients may also help to strengthen paraspinal muscles and vertebral ligaments and thus prevents relapse.

**Vaitharana Vasti:**<sup>[5]</sup> *Vasti Chikitsa* is considered as *Ardha Chikitsa* for *Vathavyadhi*. *Vaitharana Vasti* has

unique formulation and specific indications. *Acharya Vangasena* has indicated *Vaitharana Vasti* with *Ksheera* in *Gridhrasi* and *Kati Uru Prushta sofa*. Here, *Sahacharadi Thaila Mezhlukupakam* was selected as *Sneha Dravya* considering its special action in lower limb pathologies. Generally *Vaitharana Vasti* is considered as kind of *Theekshna Shodhana Vasti* due to presence of ingredients such as *Amlika*. But this *Ksheera Vaitharana Vasti* provide *Shodhana*, *Shamana* and *Brumhana* properties simultaneously.

#### Internal Medicines

During initial one week, drugs with *Deepana*, *Pachana*, *Ama Sophahara* properties was administered. As inflammation is highly associated with the pathogenesis of disc degeneration, disc prolapse and associated pain mechanisms, these medicines were opted. During second stage of treatment i.e., after *Peyadikrama*, disease specific drugs were administered.

**Table 4: Probable Mode of Action of Internal Medicines**

| Medicine                              | Mode of action   |
|---------------------------------------|--|
| <i>Gandharva hasthadi kashayam</i>    | <ul style="list-style-type: none"> <li>• <i>Vatha Kaphahara</i>, <i>Deepana Pachana</i> and <i>Malashodhana</i> properties.</li> <li>• <i>Hareethaki</i>, <i>Chiravilwa</i> and <i>Punarnava</i> helps in <i>Vathanulomana</i></li> <li>• <i>Chithraka</i> and <i>Shunti</i> has <i>Ushna Veerya</i>, <i>Deepana Pachana</i> action and also leads to <i>Srotho Shodhana</i></li> </ul>  |
| <i>Vaiswanara Churnam</i>             | <ul style="list-style-type: none"> <li>• Most ingredients are having <i>Katu Thiktha Rasa</i> and <i>Katu Vipaka</i>.</li> <li>• Has <i>Vathanulomana</i>, <i>Vibandhahara</i>, <i>Shoola- Shothahara</i> and <i>Kapaha - Vathahara</i> properties.</li> <li>• Has scientifically proven for anti inflammatory action of <i>Vaiswanarachurnam</i>.<sup>[6]</sup></li> </ul>  |
| <i>Yogaraja guggulu</i>               | <ul style="list-style-type: none"> <li>• Among 29 ingredients, most drugs have <i>Thiktha</i>, <i>Kashaya</i>, <i>Katu rasa</i>, <i>Ushna- Ruksha guna</i>, <i>Ushna veerya</i> and <i>Kapha-vatha hara</i> properties.</li> <li>• It acts as <i>Vedana sthapaka</i>, <i>Shothahara</i> and <i>Nadi balya</i></li> </ul>   |
| <i>Sahacharadi Kashayam</i>           | <ul style="list-style-type: none"> <li>• All the 3 ingredients are having <i>Vatha- Kapha Shamaka</i>, <i>Vedanasthapaka</i>, <i>Shulahara</i>, <i>Shothahara</i> and <i>Nadi Uthejaka</i> properties.</li> <li>• The GC MS analysis of <i>Sahacharadi Kashayam</i> was reported showing the presence of molecules such as Heptanediamide, N, N-di-benzoyloxy-Benzoic acid, Eugenol, Tetradecanoic acid etc which are known to have anti-inflammatory properties.<sup>[7]</sup></li> </ul> |
| <i>Sahacharadi 21 avarthi thailam</i> | <ul style="list-style-type: none"> <li>• Strengthening and nutritive effect on various neuro muscular structures in lumbar region and lower extremities.</li> </ul>  |

#### CONCLUSION

Current case study reveals the effectiveness of Ayurveda treatment modalities in the management of lumbar disc herniation with radiculopathy. The treatment protocol is formulated such that, it helps to reduce the initial inflammatory process, aids in early resolution of herniated disc and also to strengthen spinal muscles and ligaments thus preventing chances of relapse. There was complete relief of pain, significant improvement in degree of SLRT and ODI score. Relief obtained after treatment was sustained during follow up period also. However, further studies

with radiological evaluation are needed to bring more lights into it.

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