

# A Case Report On Role Of Ayurveda In Lumbar Disc Herniation

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**Abstract-** Pain in the distribution of the lumbar or sacral roots is often due to disc protrusion. In industrialized area, 60-70% people are found with low back pain. The purpose of the study is to explore *ayurvedic* management to enhance the quality of life in patients suffering from low-backache due to Lumbar Disc Herniation. *Katigraha* is occurring mainly due to the imbalance of *vata dosha* hence, the treatment plan will be accordingly. Here is a case presentation of 28 years old patient with complaints of low back-pain and numbness in bilateral lower limbs with neck pain since 3 months. Her MRI report shows posterior disc bulge with disc desiccation noted at L5-S1 indenting the thecal sac. The modern medicines are used specifically analgesics for pain relief but these are not devoid of complications mainly in long term use. Surgical procedures are the last option but that is not always effective. Owing to these reasons, it is obligatory to plan treatment with good efficacy and no toxicity profile. Considering the issue, a single case study has been done with *ayurvedic* management accordingly. As *Kati* is mainly *sthana* of *vata* so *Basti* was planned. Miraculous results were witnessed in form of complete cure of low back pain and numbness in bilateral lower limbs by *SHODHANA*, *SHAMANA* and *YOGA-ASANAS* within three months of treatment.

**Index Terms-** *Katigraha*, *vata dosha*, *Basti*, *Asanas*

## I. INTRODUCTION

Low back pain is most common rheumatic disorder accounting for 30% to 50% of rheumatic musculoskeletal complaints encountered by general practitioners.<sup>1</sup> Pain in the distribution of lumbar or sacral roots is almost always due to disc protrusion. The intervertebral disc are the cushions that act as shock absorbers between each of vertebral bones in spine.<sup>2</sup> Taking a glance towards the anatomy, the spine is made up of individual bones known as vertebrae. Intervertebral discs are discs of cartilage that sit between the vertebrae. Intervertebral disc consists of three major components i.e. the inner- Nucleus Pulposus, the outer- Annulus Fibrosus and the cartilaginous Endplates that anchor the disc to adjacent vertebrae.<sup>3</sup> The central nucleus pulposus is a site of collagen secretion and contains numerous proteoglycans, which

facilitate water retention, creating hydrostatic pressure to resist axial compression of spine.<sup>4</sup> In lumbar disc herniation, nucleus pulposus may bulge or rupture through the annulus fibrosus, giving rise to pressure on nerve endings in the spinal ligaments, changes in the vertebral joints or pressure on nerve roots.<sup>5</sup>

Each year, herniated discs affect around 5-20 of every 1000 adults around the age group of 20-49 years.<sup>6</sup> The symptoms of herniated disc mainly depend on the location of the herniation and the amount of compression on neural structures. The onset may be sudden or gradual. Alternatively, repeated episodes of low back pain may precede sciatica by months or years. Constant aching pain is felt in the lumbar region and may radiate to the buttock, thigh, calf and foot.<sup>7</sup>

Investigation can be done through Plain X-Ray, CT-Scan but MRI would be preferred because soft tissues can be imaged well.

## II. MANAGEMENT

In 90% cases conservative treatment is given like NSAIDs, analgesic drugs, physiotherapy and early mobilization. Long term use of these drugs results in side effects. Instructions should be given for back strengthening exercises and avoid physical work likely to strain the lumbar spine. Injections of local anesthetics or corticosteroids may be useful treatment if symptoms are due to ligament injury or joint dysfunction. Surgery i.e. lumbar discectomy, endoscopic spine surgery etc. seems the last option if central disc prolapses with bilateral symptoms and signs.<sup>8</sup> Research studies explains 70-80 % results in better outcome for cases with severe radicular pain but it involves financial issues. Reoccurrence with certain complications like foot drop may happen post-operatively.<sup>9</sup>

## III. AYURVEDIC REVIEW-

In Ayurveda both the neuromuscular disorders that are present at birth and those that are gradually degenerative are *Vata* disorders or *Vata Vyadhi*. Ayurveda offers treatment methods for these disorders through a multifaceted approach. The *Vata* imbalance is treated by internal medication as well as external

treatments i.e. *Panchkarma* therapy which strengthens the affected part and helps pacify the *Dosha* imbalance.

According to Ayurveda, *kati* i.e. lumbar-sacral region is the *sthana* of *Vata* specifically *Apana Vata*. *Basti* is the prime treatment modality for *Vata Dosha*. *Acharya Charaka* praised *Basti* as half treatment and said ***Basti Vataharanam*** and some called it complete treatment as it has vast field of therapeutic action.<sup>10</sup> According to *Acharya Charak* *taila* is the best management for *vata shamana* because of its *snigdha* and *guru guna*.<sup>11</sup> These *Ayurvedic* treatments when sustained over a longer period aim to restore the patient's ability to move freely and lead a better quality of life.

**Case Report-**

- Chief complaints-** pain in low back which radiates to bilateral lower limbs.
- History of present illness-** A 28-year-old female patient reported to OPD of department of Kayachikitsa, Patanjali Ayurved hospital, Hardwar in April 2021. She was having low back pain radiating towards lower limbs with numbness while sleeping since 3 months and pain with stiffness in neck region. She then visited allopathic hospital where she was advised MRI scan and found posterior disc bulge with disc desiccation noted at L5-S1 indenting the thecal sac. Allopathic medicines including Pregabalin 75 mg and Brut flam-MR was prescribed but couldn't got much relief in 20 days. For better management she was admitted to IPD ward of our hospital.
- History of past illness-** History of accident 6 months back.
- Treatment history-** Tab. Pregabalin 1 BD and Tab. Brutaflam MR 1 BD since 20 days.
- Family history-** nothing as such.
- Examination-** while local examination patient was found with positive SLR Test at the angle of 45° as well as tenderness was also present in left iliac region.

**7. Investigation-**

MRI (Lumbo-Sacral)-

**8. Management**

- Nidan privarjan-** Patient was advised to avoid *vata-vardhaka ahara and vihara* i.e weight lifting, forward bending and heavy work during the treatment plan.
- Shodhan chikitsa-**

Considering **Lumbar Disc Herniation** as *katigraha* following *ayurvedic* plan was administered.

THERAPY	DRUG	DAYS
GREEVA BASTI	PRASARANI TAILA	7 days
KATI BASTI	PRASARANI TAILA	7 days
PATRA POTLI PIND SWEDA		7 days
ANUVASANA BASTI	KSHEERBALA TAILA (70 ml)	9 days
NIRUHA BASTI (Eranda mooladi Yapna Basti) <sup>12</sup>	Madhu- 50 ml Saindhav lavan- 5 gm	7 days

	<i>Mahanarayana taila- 70 ml</i> <b><u>Kalka Dravya</u></b> <i>Eranda moola- 10 gm</i> <i>Rasana churna- 10 gm</i> <i>Ashwagandha churna- 5 gm</i> <b><u>Kwath dravya</u></b> <i>Bala moola and eranda moola kwath - 200 ml</i>	
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Both ANUVASANA AND NIRUHA BASTI was planned in such a manner from 14\4\2021 to 29\4\2021:

Days	1	2	3	4	5	6	7	8	9
Basti	A	N	A	N	A	N	A	N	A

3. **Shaman Chikitsa** as follows:

Cap. *Ksheerabala*<sup>13</sup> – 2 BD after meal with lukewarm water. (For 3 months)

*Vatakulantaka Rasa*<sup>14</sup> – 100 mg BD (crush in the powder form) before meal with honey. (For 1 month)

Ingredients of **Cap. Ksheerabala** are as follows:

S.No.	Drugs	Qty.
1.	Bala ( <i>Sida Cordifolia</i> )	3.338 g
2.	Cow milk	75.700 ml
3.	Tila Taila ( <i>Sesamum Indicum</i> )	187.500 mg

Contents of **Vatakulantaka Rasa**<sup>15</sup> are as follows:

S.No.	Contents	Quantity
1.	<i>Mriganabhi- kasturi musk</i>	12 gm
2.	<i>Manashila</i>	12 gm
3.	<i>Nagakesara</i>	12 gm
4.	<i>Vibhitaki</i>	12 gm
85.	<i>Shudha Parada</i>	12 gm
6.	<i>Shudha Gandhaka</i>	12 gm
7.	<i>Jatiphala</i>	12 gm
8.	<i>Ela</i>	12 gm
9.	<i>Lavanga</i>	12 gm
10.	<i>Jala</i>	Q.S. for bhavana and mardana

4. Advised **ASANAS** as follows:<sup>16</sup>

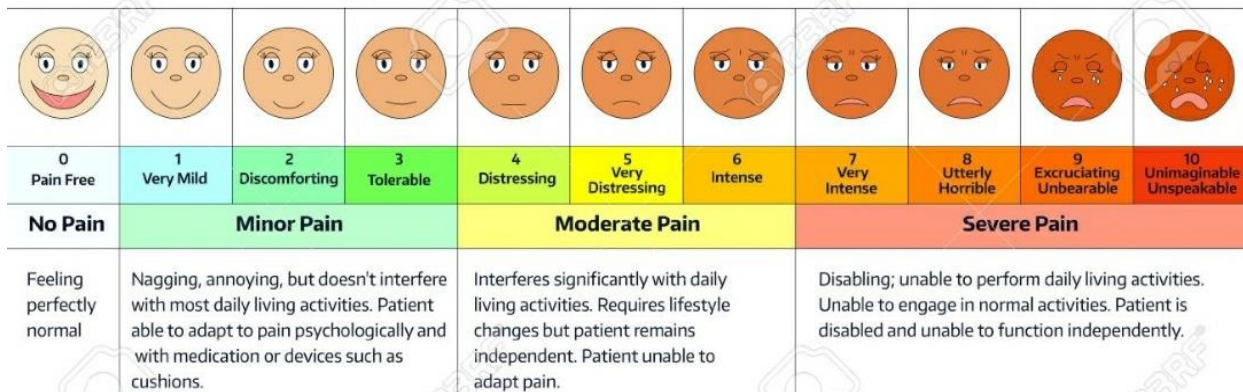
- Bhujangasana*
- Makarasana*
- Markatsana*
- Dhanurasanas*
- Vipritnaukasana*
- Setubandhasana*

5. **NIDAN PARIVARJAN-** Patient was advised to avoid *vata-vardhaka ahara and vihara* i.e weight

lifting, forward bending and heavy work during the treatment plan.

**ASSESSMENT CRITERIA<sup>16</sup>**

**COMPARATIVE PAIN SCALE CHART (Pain Assessment Tool)**



**1. PAIN ASSESSMENT**

S.no.	Pain	Before Treatment (14\4\2021)	After Treatment (29\4\2021)
1.	Low Back pain	6	1
2.	Pain in Right limb	6	1
3.	Pain in Left limb	5	1

**2. TENDERNESS ASSESSMENT**

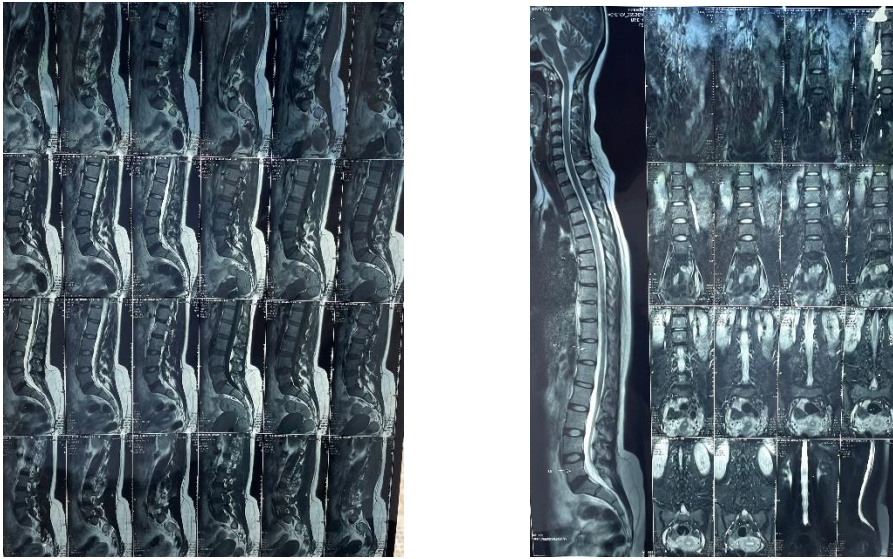
S.no.	Tenderness	Before treatment (14\4\2021)	After treatment (29\4\2021)
1.	Right Iliac Region	Present	Absent

**3. SLR Test-**

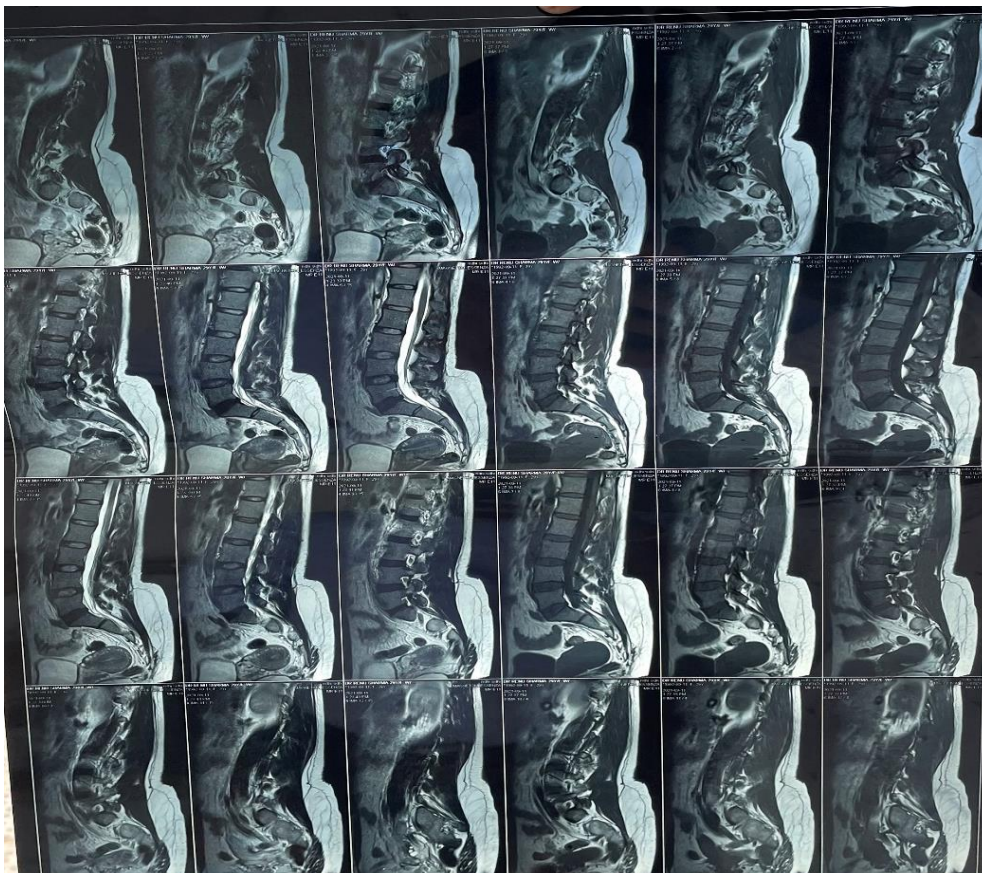
S.no.	SLR TEST	Before treatment	After treatment
1.	Right leg	Present at 45 <sup>0</sup>	Absent
2.	Left leg	Present at 30 <sup>0</sup>	Absent

**4. MRI Report-**

**Before Treatment-** Diffuse disc bulge at L5-S1 with disc herniation.



After Treatment- Subtle disc bulge at L5- S1 level.



#### IV. DISCUSSION

Injury or weakness leads to protrusion of disc through the outer ring. This is known as slipped, herniated or prolapsed disc. Disc herniation simply means a condition in which the outermost layer of annulus fibrosus are still intact but can bulge when the disc is under pressure. In adults basically it results due to poor posture, incorrect mechanics, hard physical labour, improper

lifting, especially if accompanied by twisting or turning; excessive strain, sudden forceful trauma. Herniation of disc is very common lower back especially at the L4-L5 and L5-S1 levels. The onset is generally abrupt with severe radicular pain in the lumbosacral dermatomes in the sciatic distribution. In mild cases condition may improve with rest and conservative measures. But if presence of progressive symptoms then surgical treatment is the only option.<sup>17</sup> In *Ayurvedic* prospective, L5-S1 is the real part where treatment of *Vata* specifically *Apana Vata* is important. *Basti* we choose according to the aggravated *dosha* which we find out after *prakriti*

analysis. *Prasarni Taila* is beneficial in all *Vata vyadhi so greeva basti* and *kati basti* was planned to relax the neck and back muscles. *Swedan* is a treatment modality which provides relief from *Stambha* (stiffness), *Gaurava* (heaviness) and *Sheeta* (coldness) in the body. *Patra Pinda Potli Sweda* was here planned to relax the back muscles to get rid of pain.<sup>18</sup>

#### Action of Basti dravyas inside the body:<sup>19</sup>

##### 1. *Saindhava*:

The presence of Na<sup>+</sup> in *Basti dravya* may play important role for the absorption of the drug.

##### 2. *Madhu*:

It forms the homogeneous mixture with the *Saindhava* which easily gets absorbed and assimilated by the body.

##### 3. *Sneha*:

It reduces *Vata Dushti*, softens micro-channels, destroys the compact Mala, and removes the obstruction in the channels. *Sneha* increases the permeability of cell membrane and become helpful in elimination of *Dosha* and *Mala*.

##### 4. *Kalka and Kwath Dravya*:

These are the main constituents of *Basti Dravya* and are *vatanulomaka* in property. These serve the function of *Utkleshana* of *Dosha*, *Dushya* and *Srotasa* so their main is *Samprapti Vighatana* of *Roga*.

#### Shamana Oushadhi:

a. The main contents of *Ksheerabala Capsule* are *Bala (Sida cordifolia)*, *Ksheera* (cow's milk), and *Thila Taila (Sesamum indicum)* which are antioxidant in their properties. The synergistic action of all components might thus may have potentiated its neuroprotective effect. Research studies suggests its nervine and analgesic effect along with strengthening property. Reduced pain and inflammation helps to improve mobility in patients.

b. *Vatakulantaka Rasa* is an *ayurvedic* preparation used to balance *Vata Dosha*.

Asana: They are practiced in order to achieve physical stability and steadiness.<sup>20</sup>

a. **Makarasana: (Crocodile pose)** As per *Gheranda Samhita* it expands the chest and lungs. This asana is very effective for people suffering from slipped disc, sciatica and certain types of lower back pain. It encourages the vertebral column to resume its normal shape and relieves compression of the spinal nerves.

b. **Bhujangasana: (Cobra pose)** It helps to remove backache and keep the spine supple and healthy. It improves the circulation in the back region and tones the nerves so that better communication between the brain and body results.

c. **Dhanurasana: (Bow pose)** It helps to correct hunching in the upper back and prescribed especially for the treatment of spinal disorders. The spinal column is realigned and the ligaments, muscles and the nerves are activated, removing stiffness.

d. **Viprit Naukasana: (Reverse Boat pose)** It helps to tone and strengthen the back muscles by stimulating the nerves, particularly in the lower back, while simultaneously giving a diagonal stretch to the body.

e. **Markatsana: (Monkey pose)** It is spinal twist yoga pose which helps in curing slip disc, spondylitis and sciatica. It also stretches the hip muscles and relaxes the body completely.

f. **Setubandhasana: (Bridge pose)** It strengthens the back muscles by relieving the tired back instantaneously. It gives a good stretch to the chest, neck and spine.

## V. CONCLUSION

This is a single case study and promising result has observed. For further establishment of *ayurvedic* management in patients of Lumbar Disc Herniation a pilot study or clinical trial can be planned.

## VI. DECLARATION OF PATIENT CONSENT

It is certified that I have taken appropriate patient consent. In the form the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understood that their name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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