

CASE STUDY

***Ayurveda* management of *lumbar degenerative disc disease* along with *gait disability*: a case study**

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ABSTRACT

Introduction – Lumbar degenerative disc disease associated with low back pain is commonly found in present scenario. It may develop due to presence of lumbar spinal stenosis, disc herniation, facet joint arthropathy etc. Still there is no promising therapy for arresting or rejuvenating the spine in biomedicine and the ultimate option for the disease in present day is lumbar surgery with high risk and higher cost. This case report is a patient of lumbar degenerative disc disease along with gait disability which successfully treated with Ayurveda management. **Material and methods** – A 52 year male suffering from lumbar degenerative disc disease along with gait disability was treated with Panchakarma therapy along with Ayurvedic oral drugs. In Ayurveda text degenerative disorders comes under the heading of Vatavyadhi. Patient was administered Pancha Tikta Ksheera Basti, Patra Pinda Swedana and oral medicines. Panchakarma therapy was administered for the duration of 16 days and oral medicines were continued for next five months. **Result** – Modified Oswestry disability score, straight leg rising test, visual analogue scale along with Ayurveda assessment criteria were assessed for outcome which shows good improvement. Before treatment patient was suffered from gait disability (forward bending during walk) which was changed to normal gait after five months of treatment. **Conclusion**- Panchakarma therapy with Ayurvedic oral drugs plays a significant role to manage the degenerative disorders.

Keywords : *Ayurveda medicines, Lumbar degenerative disc disease, Panchakarma therapy, Vatavyadhi.*



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Introduction:

1. **Introduction** – Lumbar degenerative disc disease (LDDD) is an age-related deterioration or disintegration of lumbar disc which leads to low back pain (LBP). Herniated disc, osteoarthritis of facet joint, and stenosis of the lumbar spine leads to lumbar disc degeneration.

LBP is often triggered by lumbar degenerative disease [1-3]. LBP is found most handicapped cause for people beneath the age of 45 years [4-6]. Lumbar disk degeneration is interpreted as a declining disk height, upper and lower plate sclerosis, spinal canal stenosis [7]. In bio medicine there is no promising therapy for arresting or rejuvenating the spine and the ultimate option for the disease in present day is lumbar surgery with high risk and higher cost. In Ayurveda there is no direct correlation of this disease is present but some characteristics of it can be affiliated with Katigraha (~ lumbar spondylosis) [8] Asthigata Vata (vitiated Vata lodged in bone tissue) [9], Gridhrasi (~ sciatica) [10] and Sandhigata Vata (~ osteoarthritis) [11]. All these conditions are covered by Vatavyadhi (disease produced by Vata Dosha vitiation). The present case was also treated on the principal of management of Vatavyadhi. Vata Dosha had a significant participation in the patient's chief complaints that was low back pain, stiffness in the back, radiating pain in the right lower limb and difficulty in walking. As per the treatment protocol to reverse the degeneration, Pancha Tikta Ksheera Basti, Patra Pinda Swedana was adopted as Panchakarma procedures along with Ayurvedic oral medicine in present case. Tikta ksheera Basti is mainly indicated in Astipradoshaja Vikara (~disease originated due to vitiation of bone tissue) [12] and it is also cited that Abhyantara (internal) and Bhaya (external) Snehana (oleation) are the best measures for the disease in Asthigata Vata [13]. Modified Oswestry disability score (ODI), straight leg rising test (SLR), visual analogue scale (VAS) along with Ayurveda assessment criteria were assessed for outcome of the therapy.

2. Materials and Methods –

2.1 Case presentation – A 52 year old male came to OPD of National Institute of Ayurveda, Jaipur, India on September 28, 2018 with complaints of low back ache and difficulty in walking. OPD registration number of patient was 70628092018. On examination it was found that the patient was suffering from low back ache, radiating pain to right lower limb, stiffness at back and difficulty in walking and forward bending during walk (propulsive

gait)[video 1]. This condition had appeared gradually from last four years. Firstly patient developed low back ache and stiffness at back gradually he felt radiating pain in right lower limb. Since last two years patient suffered from gait disability (forward bending during walk). The patient had taken allopathic medicine irregularly for these complaints. On examination, patient was found distressed, tongue was uncoated, Micturation and bowel movement were normal. On tenfold examination (Dashavidha Pariksha) it was found that patient has Vata Kapha Prakrati (physical constitution), Avara Vyayam Shakti (less capability to carry on physical activities) and Madhyama Vaya (middle age). Patient didn't have any traumatic or operative history. On physical examination the SLR test for lumbar movement and ODI was measured. X ray of LS spine A-P (Anterior-posterior) and lateral view showed degenerative changes. The patient was suffering from lumbar disc degenerative disease. Other laboratory investigations and vital signs were found normal. According to Ayurveda, this case was managed on Vatavyadhi's administration line. Ayurvedic oral medicine was given to the patient included: a combination of *Ashwagandha Churna* (*Withania somnifera*), *Satavari Churna* (*Asparagus racemosus*), *Nagradhya Churna* (a proprietary medicine of National Institute of Ayurveda, Jaipur, India) and *Sankh Bhasma*, *Yograj Guggulu*, *Dashamula Kwatha* and *Panchasakar Churna*. These oral medicines were continued for next five months. Along with these oral medicines patient was administered a set of Panchakarma therapies includes Patra Pinda Swedana (massage and sudation) and Pancha Tikta Ksheera Basti (enema with decoction of drug). These Panchakarma therapies were administered for sixteen days.

2.2 Plan of study: National institute of Ayurveda, hospital, Jaipur and single case study.

2.3 Ayurveda intervention –

Posology of Ayurvedic oral medicines is mentioned in table no.1

Posology of Panchakarma procedures is mentioned in table no. 2

2.4 Criteria for Assessment: Assessment of patient was done on the basis of grading of Ayurveda parameters, ODI scale, SLR test and visual analogue scale which placed in table no .3.

3. Result – Ayurveda assessment criteria along with Modified ODI, SLR test and VAS were assessed for outcome which shows good improvement (overall assessment of parameters before and after treatment is mentioned in table no. 4). Before treatment patient was suffered from gait disability (propulsive gait) which was changed to normal gait after five months of treatment (video no. 2).

4. Discussion and conclusion – Present study was of low back pain, stiffness at back, radiating pain in right lower limb and difficulty in walking. Patient was suffered from lumbar degenerative disorder. In Ayurveda there is no direct correlation of this disease is present but some characteristics of it can be affiliated with Katigraha, Asthigata Vata, Gridhrasi and Sandhigata Vata. Vitiated Vata Dosha and Vikriti of Asthi Dhatu are mainly found in this condition. It can therefore be considered as Asthigata Vata, as its pathogenesis is bone tissue degeneration and Vata vitiation. All these conditions are covered by Vatavyadhi (disease produced by Vata Dosha vitiation). The present case was also treated on the principal of management of Vatavyadhi. The LDDD's main areas of pathology are intervertebral discs and vertebral bodies of the lumbar spine. The factors like old age, trauma, inflammation, old age etc. leads to degenerative changes at spine. All these causes lead to spondylotic changes at spine. When the disease progress the osteophyte develop between two adjacent vertebrae. These all causative factors are mentioned as Vata Prakopa in Ayurveda. The Vata Dosha gets vitiated and lodges into the Asthi due to Asharya Asharyi Bhava.

In LDDD vitiated Vata lodges at Asthi of lumbar region because Khavaigunya found at lumbar region. This vitiated Vata leads to Dhatu Kshaya (degeneration). Due to Dhatu Kshaya there is need of Brihmana (provide nutrition or anabolic) and Rasayana (immunomodulator) Chikitsa. The drugs and procedures which have Brihmana

and Rasayana property were selected in this case. The pathologic process of Vatavyadhi is break by Basti, by removing Margavarodha (by purification of channels) and Dhatukshaya by its Brihmana (~ nourishing) property. Basti used in this case was mainly made of Tikta Rasa and Madhura Rasa and Tikta Ksheera Basti is also mentioned in treatment of Asthi Pradoshaja Vikara. Tikta Ksheera Basti has Rasayana, Balya effect and also by Ksheera and Sneha provoked Vata get pacify and by it Asthi Dhatu also get nourishment and through Tikta Rasa Asthi Dhatu restores. Tikta Rasa has Sothaghana (anti-edematous and anti-inflammatory) property. Ghrita and honey have Madhura Rasa (sweet taste) dominance. Combinations of all these drugs are acting as Vatahara (suppressors and eliminators of deranged Vata Dosha) that decreases inflammation and treat LDDD. Patra Pinda Swedana is a kind of Snigdha Swedana has Vatashamaka property which owned by drugs used in this procedure. By simultaneous Snehana and Swedana, Dosha get pacified. Oral medicines used in this also have properties of Brihmana and Doshashamak. Dashamula Kwatha has Tridoshaghna property (alleviates deranged Doshas of the body) and is helpful in all types of Vatika disorders [14]. Ashwagandha and Satavari have Rasayana (immunomodulator) and Balya (nutrition) properties [15]. Yograj Guggulu is a polyherbal formulation used in Vatavyadhies since ancient time [16]. A good result was obtained in this case on all the parameters of disease. Before treatment patient was suffered from gait disability which was changed to normal gait after five months of treatment (video no.2). An informed consent was taken from patient for present case study. Results obtained in this case demonstrate that management of LDDD with Panchakarma and along with Ayurvedic oral medicine may provide a good approach to manage degeneration.

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6. Conflict of interest –No conflicts of interest

Table no. I – Ayurvedic oral medicines with dose and duration

| Name of the drug used orally | Dose | Duration and Anupana |
|--|--|---|
| Yograj Guggulu | 500mg twice daily | With Dashamula kwatha for five months |
| Dashamula kwatha | 40 ml. twice daily | For five months |
| Combination of Ashwagandha Churna Satavari Churna Nagradhya Churna Sankha Bhasma | 2gm. 2gm. 2gm. 500mg. twice daily | With luke warm water For five months |
| Panchasakar Churna | 5gm at bed time | With lukewarm water |

Table no. – II Panchakarma therapies with method of preparation and application –

| Panchakarma procedure | Method of preparation | Method of application | Duration |
|----------------------------------|---|--|-----------------|
| <i>Patra Pinda Swedana</i> | A bolus form by – Leaves of Nirgundi (Vitex negundo), Eranda (Ricinus communis), Shigru (Moringa oleifera) and Rasona (clove of Allium sativum), Yavani (Seeds of Trachyspermum ammi) and Nimbu (Citrus limon) Dashamula Taila – for heating the bolus | Whole body massage for 45 minutes by a Potali of cotton bag filled with bolus. | 16 days |
| <i>Pacha Tikta Ksheera Basti</i> | It was a homogenous colloidal solution having volume of 520 ml which contained Madhu (Honey) – 50gm, Saindhav – 5gm, Panchatikta Ghrita- 50ml, Ashwagandha Taila- 50gm, Satapushpa Kalka - 15gm and milk processed with Panchatika Kwath (combination of five drug i.e. Guduchi, Nimba, Vasa, Patol and Kantakari) - 350ml. | Given before meal (empty stomach) Route of administration – Per rectal | 16 days |

Table - III Grading scale of symptoms-

| S. No. | Symptoms | Grading |
|---------------|--|----------------|
| 1. | Katishula (Low back pain) | |
| | No pain | 0 |
| | Occasional pain | 1 |
| | Mild pain but no difficulty in walking | 2 |
| | Moderate pain and slight difficulty in Walking | 3 |
| | Severe pain with severe difficulty in Walking | 4 |
| 2. | Kati Stambha (Stiffness) | |
| | Never / Completely Disagree | 1 |
| | Rarely / Disagree | 2 |
| | Sometimes / Neutral | 3 |
| | Often / Agree | 4 |
| | Always / Completely Agree | 5 |
| 3. | SLR test | |
| | No pain at 90 ° | 0 |
| | Pain >71 up to 90° | 1 |
| | Pain >51 up to 70° | 2 |
| | Pain >31 up to 50° | 3 |
| | Pain below 30° | 4 |
| 4. | ODI scale | |
| | Minimal disability (0% - 20%) | 0 |
| | Moderate disability (21% - 40%) | 1 |
| | Severe disability (41% - 60%) | 2 |
| | Crippled (61% - 80%) | 3 |
| | Bed bound (81% - 100%) | 4 |
| 5. | VAS scale | |
| | No pain | 0 |
| | Distress | 1 |
| | Annoying | 2 – 3 |
| | Uncomfortable | 4 |
| | Dreadful | 5 – 6 |
| | Horrible | 8 |
| | Unbearable distress | 9 |
| | Agonizing | 10 |

Table no IV. – Overall assessment of parameters

| Assessment parameters | Grade | |
|-----------------------|------------------|-----------------|
| | Before treatment | After treatment |
| Katishula | 3 | 2 |
| Katistambha | 5 | 3 |
| SLR (Right limb) | 2 (60°) | 1 (70°) |
| ODI | 2 (40%) | 1 (26 %) |
| VAS | 5 | 1 |

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सारांश:

परिचय – वर्तमान परिपेक्ष में लम्बर डिजेनेरेटिव डिस्क डिजीज के साथ कटि शूल सामान्यतया मिलता है। इसके उत्पन्न होने में लम्बर स्पाइनल स्टेनोसिस, डिस्क हर्नियेशन, फैसेट जॉइंट अर्थ्रोपेथी आदि कारण हो सकते हैं। अभी तक बायोमेडिसिन में स्पाइन को रेजुवनेट करने के लिए कोई आशाजनक उपचार नहीं है, एवं इस रोग के लिए अंतिम विकल्प, उच्च जोखिम और उच्च लागत युक्त लम्बर सर्जरी है। यहां पर हमने लम्बर डिजेनेरेटिव डिस्क डिजीज का एक ऐसा वैयक्तिक अध्ययन प्रस्तुत किया गया है जिसका आयुर्वेदिक चिकित्सा के द्वारा सफलतापूर्वक उपचार किया गया है।

मुख्य नैदानिक विषय – कटि शूल के साथ चलने में कठिनाई

निदान – रोगी का रोग निदान, नैदानिक परीक्षा एवं रेडियोलोजिकल परिणाम के आधार से लम्बर डिजेनेरेटिव डिस्क डिजीज के साथ गेट डीसीबिलिटी से किया गया। आयुर्वेदिक संहिता में डिजेनेरेटिव विकार वातव्याधि के अंतर्गत आते हैं।

चिकित्सा – रोगी का उपचार पंचकर्म प्रक्रिया एवं आयुर्वेदिक औषधियों के द्वारा किया गया। रोगी को पञ्चतित्त क्षीर बस्ति, पत्र पिण्ड स्वेदन एवं आयुर्वेदिक औषधियों दि गई थी। पंचकर्म चिकित्सा को 16 दिनों की अवधि के लिए दिया गया था एवं अगले पांच महीनों तक आयुर्वेदिक औषधियों को जारी रखा गया था।

परिणाम – संशोधित ऑसवेस्ट्री डिसेबिलिटी स्कोर, स्ट्रेट लेग राइजिंग टेस्ट, विसुअल एनालॉग स्केल के साथ-साथ आयुर्वेद के मूल्यांकन मानदंड का मूल्यांकन किया गया जो अच्छे सुधार को दर्शाता है। उपचार से पहले रोगी गेट डिसेबिलिटी (चलने के दौरान आगे की ओर झुकना) से पीड़ित था, जो पांच महीने के उपचार के बाद सामान्य रूप में हो गई थी।

निष्कर्ष – आयुर्वेदिक औषधियों के साथ पंचकर्म चिकित्सा डिजेनेरेटिव विकारों की चिकित्सा में महत्वपूर्ण भूमिका निभाती है।