

Management of Lumbar Canal Stenosis through Panchakarma: Case Study

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Abstract

Lumbar canal stenosis is a narrowing of spinal canal and compressing the nerves travelling through the lower back into the legs. The symptoms includes pain, weakness and tingling sensation or numbness of legs which radiate down to the feet along with psuedoclaudication, typically worsens with standing or walking and improves with sitting and is often related to posture and lumbar extension. It will hamper daily activity of patient along with quality of life. In modern science there is no appropriate treatment except surgical intervention which is having complication and also the chances of recurrence. *Ayurveda* can provide a suitable answer through appropriate *Panchakarma* modalities useful in Lumbar Canal Stenosis. According to *Ayurveda* it can be related to *Katigata Vata* but it is not a separate disease entity. In Ayurvedic literature it is explained as one of the *Vatavyadhi*. The present case study will analyse effectiveness of *Panchkarma* in Lumbar Canal Stenosis.

Keywords: Lumbar Canal Stenosis, Panchakarma, Katigata Vata, Vatavyadhi.

Introduction

Lumbar canal stenosis is the medical condition in which the spinal canal narrows and compresses the nerves and blood vessels at the level of the vertebrae of lumbar area. Lumbar spinal stenosis causes pain in the low back or buttocks, abnormal sensations and the numbness in the legs, thighs, feet or buttocks or loss of bladder and bowel control. The annual incidence of Lumbar canal Stenosis is reported to be five cases per 100,000 individuals which is fourfold higher than the incidence of cervical canal stenosis.¹ A population-based study in Japan² found that the LSS incidence was increased by age, about 1.7–2.2% in 40–49 years old population, and 10.3%–11.2% in 70–79 years old population. Acquired lumbar canal stenosis occurs due to degenerative joint disease related with vertebra and spinal cord. A community based cross sectional study in Wardha it was observed that most (82%) of the workers, who performed the activities of brick making experienced musculoskeletal symptoms any time during last one year

in shoulder (s) followed by lower back (71%)³. Therefore causes of lumbar canal stenosis are occupational over use of joint, metabolic diseases (hyperparathyroidism, hemocromatosis, and ochronosis). Lumbar canal stenosis can also be caused by osteophytes, osteoporosis, tumour, trauma or various skeletal dysplasia, such as with pseudoachondroplasia and achondroplasia. The most common form of degenerative canal stenosis generally becomes symptomatic during or after the seventh decade of life³. It is more common in women than in men⁴. In a study population of 100 patients, Amundsen et al. found the occurrence of back pain and sciatica in 95%, and claudication in 91% of the patients. Obesity is a major risk factor⁵. Conservative treatment of lumbar canal stenosis includes physiotherapy, anti-inflammatory medications, lumbar corsets and epidural injectables⁶. It is generally accepted that surgery is indicated if well-conducted conservative management fails⁷.

So there is a need and scope of *Ayurveda Panchakarma* treatment which can improve the quality

of life hampered due to associated pain and to limit the further degeneration of spine. The description about *Katigata Vata* is not a separate disease entity in any Ayurvedic text. It is mentioned as one of the *Vatavyadhi* by *Charaka*⁸. In case of *Katigata vata*, *dhatu kshaya* (direct stress induced factor at the *Kati* region and loss of nutritional support to the *asthis*, *sandhis* and surrounding *snayus* together lead to *vata prakopa* in *asthivaha srotasa*. This lead to the symptoms of numbness (*suptata*), stiffness (*stambha*) and restriction in movement (*gati avrodh*). *Ayurveda* can provide miraculous effect to such patient with the help of *panchakarma*. *Basti* procedure is main treatment used for the vitiated *vata*⁹. In the management of '*Asthi Prodoshaj Vyadhi*' *Charaka* stated '*Kshir Basti*' and '*Sneha Basti*¹⁰.

Aims: Management of Lumbar Canal Stenosis through *Panchakarma*: Case Study.

Objectives::

1. To observe the symptoms of lumbar stenosis in patient.
2. To prepare an Ayurvedic line of treatment according to samprapti of disease.
3. To analyze results.

Methodology

To fulfil the aims and objectives of the study this work has been carried out in the following phase wise manner.

1. Case study.
2. Discussion.
3. Conclusion and summary

Plan of Work: The clinical study was conducted in the I.P.D. of Datta Meghe Ayurveda College & Hospital, Nagpur.

1. Patient was suffering from the lumbar canal stenosis with reference to *Katigata Vata* admitted in I.P.D. of Datta Meghe Ayurveda Hospital.
2. *Panchakarma* treatment protocol was planned which includes *Sarvanga Patra pottali sweda*, *Sarvanga Shashtika pinda sweda*, *Katibasti*, two courses of *Kalabasti* for 33 days.
3. First course of *Kalabasti* has *Erendamooladi Niruha Basti* 450 ml and *Sahacharadi tailam Matra Basti* 60 ml.

4. Second course of *Kalabasti* has *Panchatikta ksheera Basti* 300 ml and *Sahacharadi tailam Matra Basti* 60 ml.
5. VAS (Visual analogue scale), An Owestry low back pain disability Index¹¹, 6MWT (6 min walking test), Pin prick test to assess the patient.

Case Study: A 55 yr old Female Indian, married consulted in Out-Patient Department of *Panchakarma* at Datta Meghe Ayurveda Hospital presenting with complaints pain in lumber region radiating to both lower limbs, Tingling sensation in both lower limbs below knee joint for 3 years. Patient was unable to walk or lie straight and was not able to perform his daily personal work, chappal slip from right foot. But from 15 days there is severity in symptoms. She was also suffering from constipation since long duration. The patient was diagnosed as Lumbar canal stenosis in Government hospital Nagpur and advised surgery but patient was not willing to operate. So the patient was admitted in *Panchakarma* female ward of Datta meghe Ayurveda Hospital on 2nd September 2019.

On examination:

1. General condition of patient was moderate and a febrile.
2. PULSE: 82/min
3. Blood pressure: 140/80 mm of hg
4. Pallor: present
5. Systemic examination:

CVS: S1 S2 Normal

CNS: Well oriented, conscious.

RS: AE=BE, clear.

P/A: Soft, non tender; Liver, Kidney,

Spleen: Not palpable.

Ashta Vidha Parikshan¹²:

1. Nadi- Pitta Vata
2. Mala-Malavshtambha (occasionally)
3. Mutra – Samyak Pravrutti
4. Jivha- Sama
5. Shabd-Spashta.
6. Sparsha- Anushna Sheet

7. Druk-Panduta

8. Akriti- Madhyam.

Vikrut Strotas Parikshan: Rasavaha Strotas: Ubhaya Pindiko Dveshtan (cramps in both legs), Panduta (pallor).

Asthivaha Strotas: Katishool (pain in lumbar region), Kati to Vama Pada Shool (radiating pain from lumbar region to left legs).

Majjavaha Strotas: Tingling and numbness in both upper and lower limb, difficulty in walking, slipping of chappal from right foot.

Present Illness: Patient was having above complaints from three year. She was consulted and admitted at Government hospital Nagpur for treatment and But there was no improvement in any symptoms during treatment and so they advised surgery. So that patient came to the Datta Meghe Ayurveda Hospital for further treatment.

Past History: No H/O- DM/HTN/IHD/PTB/BA/ Jaundice/Typhoid or any other major medical illness.

No H/O-Any major surgical illness.

No H/O- Accident

H/O- fall from 5 foot height before 5 years.

Clinical examination of spine

Inspection: No scoliosis, no lordosis, no kyphosis were found in the patient. No any other major abnormality was seen in spinal examination of patient. No any swelling and surgical marks were seen in spinal examination of patient.

Gait: waddling gait.

Palpation and other clinical examinations

SLR -right + at 45°.

Left + at 50°.

VAS score –10.

6MWT- 50 m

Owestry low back pain disability Index- 45%

Investigation:

Haemoglobin %- 9.2gm %

Total Leucocyte Count- 8200 cu/mm

Differential Leucocyte Count-Polymorph-55%, Lymphocyte-47%, Eosinophil + Monocyt-3%

Urine examination

Albumin- Nil

Sugar- Nil

Microscopic examination- NAD

RBS (random blood sugar)-106 mg/dl.

MRI of Lumbar Spine: MRI on dated 2/12/2018 reported that Marginal osteophytes at multiple level. L3- L4 disk reveals diffuse posterior bulge compressing thecal sac without neural compression. L4-L5 dick reveals broad based posterocentral protrusion compressing thecal sac and bilateral L5 nerve root. Facetal arthropathy and ligamentum flavum thickening is noted at this level, contributing to central canal stenosis.

Panchakarma chikitsa¹³: for *Katigata vata* case Table No. 1.

Panchakarma procedures	Method of preparation	Method of administration	Duration of treatment
Sarvanga PPS	Leaves of <i>Erenda</i> , <i>Nirgundi</i> , <i>Amlika</i> , <i>Shigru</i> , <i>Karanja</i> etc <i>vatahara dravya</i> cooked with <i>methika</i> and <i>shatpushpa churna</i> and tied in cotton cloth in the form of <i>pottali</i> .	The <i>pottali</i> is dipped in warm <i>tila tailam</i> and applied all over body in 7 position of <i>abhyanga</i> .	14 days
Katibasti	Ring shaped cavity made at centre of low back by dough prepared by black gram flour.	Warm <i>tila tailam</i> and <i>sahacharadi tailam</i> in equal quantity is filled in the ring repeatedly upto 45 minute.	22 days
Sarvanga SPS	500 gm <i>shashtika</i> rice cooked in 1.5 liter <i>Balamoola kashaya</i> and 1.5 liter of milk and boiled till it becomes semisolid. Tie in cotton cloth in the form of <i>pottali</i> .	The <i>pottali</i> is dipped in warm milk <i>balamoola kashaya</i> mixture and applied all over body in 7 position of <i>abhyanga</i> .	14 days

Panchakarma procedures	Method of preparation	Method of administration	Duration of treatment
Erendamooladi Niruha basti	<i>Erendamooladi kashaya</i> 300ml + <i>Shatapushpadi kalka</i> 30 gm + <i>Sahacharadi tailam</i> 50 ml + Honey 50 ml + Gomutra 30 ml + <i>Saindhava</i> 15 gm	Administred in left lateral position with <i>basti yantra</i> before meal.	Total 6 <i>basti</i> for first round of <i>kala basti</i> manner.
Panchatikta ksheera basti	<i>Guduchi, Nimba, Vasa, Patola, Kantakari ksheera kashaya</i> 200 ml + honey 40 ml + <i>Sahacharadi tailam</i> 60 ml	Administred in left lateral position with <i>basti yantra</i> before meal.	Total 6 <i>basti</i> for second round of <i>kala basti</i> manner.
Anuvasana Basti	60 ml of warm <i>Sahacharadi tailam</i>	Administred in left lateral position with <i>basti yantra</i> before meal	Total 20 <i>basti</i> for two round of <i>kala basti</i>

Table No.2 First round of Kala basti

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Type of Basti	A	A	EN	A	EN	A	EN	A	EN	A	EN	A	EN	A	A	A

A = *Anuvasana basti*, EN= *Erendamooladi Niruha basti*

Table No.3 Second round of Kala basti

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Type of Basti	A	A	PN	A	PN	A	PN	A	PN	A	PN	A	PN	A	A	A

A = *Anuvasana basti*, PN= *Panchatikta kasheera basti*

Table No.4 BT and AT comparison of Lumbar canal stenosis

Domain	BT	AT
VAS	10	4
Owestry disability Index	45%	20%
6MWT	50m	320m
Pin prick test for both lower limb	Numbness	Normal

Discussion

Lumbar canal stenosis is the most common condition associated with lumbar spine now days and causes changes in the locomotor system. It is highly prevalent in old age, mostly advised for surgical correction. Surgical treatment has excellent effects and remission in symptoms is seen in 64% of patients¹⁴. But mostly symptoms reappear after surgery and no complete cure so patients are seeking for alternative treatments such as *Ayurveda* can be useful. *Doshas* in this case found *kha vaigunya* at *kati Pradesh*, *sthana Samshraya* occurred in the *asthi, sandhi, snayus* of *kati* region. Hence, we have followed line of treatment of *katigata vata* for this case.

Ayurvedic interventions relieved the symptoms by doing *samprampti bhang*. After *Panchakarma* treatment, the patient got its symptoms relieved.

Patra pinda swedana (PPS) made of *vatahara dravyas* and *sarvanga abhyanga* with *Tila tailm* which when applied locally increases the permeability of the skin. *Patra Pinda Sweda* is an unparalleled treatment in painful conditions caused predominantly by *Vata Dosh*, mainly in degenerative diseases. *Patra Pinda Sweda* is mainly performed to relief from pain, inflammation, swelling and stiffness associated with bone, joint and or musculoskeletal pains¹⁵.

Shashtika pinda sweda (SPS) made of *shashtika shali* is cooked with milk and decoction of *balamoola kwatha*. In SPS heat, massage and pressure causes nourishment of joints, tendons and stimulate nerve ending. *Shashtika pinda sweda* will help to improve circulation, nourishment to the body and it improves the strength of the tissues of bones and muscles¹⁶.

Katibasti involves retention of warm medicated *tailam* over the lower part of spine for specific period. It

reduces pain, numbness, strengthens the back muscles, reduces stiffness, and increases blood circulation of the local region. It also have nourishment property for muscle of spinal column¹⁷.

Basti: *Pakwashya* is the *moolasthan* of *vata dosha*. *Basti* by its action on *moolasthan* get control on *vata* all over body. *Basti* is most widely used and highly effective treatment for spine and neurological disorder. *Anuvasana basti* has *Balya*, *Brimhana*, *Vatarogahara* property and also provides deeper nourishment to deep *dhatu*¹⁸.

Conclusion

From the above case study we can say that *Ayurveda* can be opted as alternative treatment in lumber canal stenosis. The main *dosha* vitiated is *vata*. In this case *Katigata vata* line of treatment has to be considered. In *Ayurveda* point of view if proper *Panchakarma* protocol performed the *samprapti bhanga* can be achieved with significant relief from the disease symptoms. From this study we can suggest that *Panchakarma* therapy have effective role in lumber canal stenosis and can be done in large population.

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Conflict of Interest: nil.

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