

Ayurvedic Management of Lumbar Spinal Stenosis- A Case Report

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ABSTRACT:

Lumbar spinal stenosis is the narrowing of the spinal canal, compressing the nerves travelling through the lower back into the legs. Modern management suggests surgical approach such as decompression laminectomy, if the patient develops progressive neurological deficits (leg weakness, foot drop, numbness in the limb). This study reports the effect of *Ayurvedic* management in such condition. A 61 year old male shopkeeper visited the *Kayachikitsa* OPD with complaints of weakness of bilateral lower limbs and numbness of both foot. He had undergone *Ayurvedic* IP treatment twice from this hospital during the last 2 years and got significant relief and is again admitted for third course. *Khanja / Pangu* explained under *vatavyadhi* may be considered here as walking difficulty is the presentation. The *Ayurvedic* management is observed to be effective in IVDP and canal stenosis.

KEY WORDS: *Khanja*, Lumbar stenosis, Peroneal neuropathy, *Rasayana*, *Sodhana*, *Vatavyadhi*.

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INTRODUCTION:

Lumbar spinal stenosis refers to an anatomic and pathologic condition that includes narrowing of the lower spinal canal (central stenosis) or one or more lumbar vertebral foramina (foraminal/lateral stenosis).^[1] Spinal stenosis most often occurs in adults over 60 years of age. The prevalence of so-called acquired degenerative lumbar stenosis has been suggested as ranging from 1.7 to 13.1%.^[2] It is diagnosed from history, physical examination, and imaging studies and can be managed with physiotherapy, non-steroidal anti-inflammatory drugs (NSAID), and surgical laminectomy.

In *Ayurveda* Intervertebral Disc prolapse or canal stenosis can be mostly correlated to *Kateegraha/Gridrasi* but, in this case, peroneal neuropathy is associated and the patient had walking difficulty in the form of weakness with foot drop.^[3] Management included internal *samana* (pacifying) and *sodhana* drugs (eliminating) along with *vata hara* procedures comprising initial *rookshana* (drying), *snehana* (oleation), *swedana* (sudation), *vasthi* (medicated retention enema), *brimhana* (nourishing) and *rasayana* (rejuvenation therapy). This is the case report of a lumbar spinal stenosis successfully managed with the principle of *Vatavyadhi*.

CASE HISTORY:

A 61 year old male working as shopkeeper presented in Kayachikitsa OPD with weakness of both lower limbs and numbness of both foot. The complaints started 3 years back as low back pain and numbness of both lower limbs below knee. Gradually the complaints aggravated and within a period of 6 months he developed weakness of both lower limbs (Rt > Lt) along with muscle wasting. He felt walking difficulty in the form of imbalance. He had taken Allopathic medication which brought no considerable relief. He underwent Ayurvedic treatment 3 years back and had moderate relief. With the second course of IP treatment last year, he got absolute relief of pain and significant improvement in weakness, numbness and wasting. The walking difficulty also relieved. At present, he is having mild weakness of right lower limb along with numbness over soles and is admitted for the third course of treatment.

On examination, Body mass index (BMI) was 20.8 with height-164 cm and weight-56

kg. Vitals -Respiratory rate- 18/min, Pulse rate 76/min and B.P - 120/80 mm Hg.

No claudication pain and, other systemic findings were unremarkable.

Investigations: (24/9/ 2021)

Lab investigation- Hb- 11.2 mg%, ESR - 26 mm/hr, FBS- 81 mg/dl, Total cholesterol - 175 mg/dl.

MRI lumbar spine [9/7/2019] - Posterior and posterolateral disc prolapse at L4- L5, Annular disc bulges at L3-L4, L5-S1.

Nerve conduction study- Right peroneal neuropathy.

General examination and assessment through Ayurvedic parameters revealed the following therapeutic indicators.

Management: Patient underwent 3 courses of Ayurvedic treatment from the hospital in consecutive years and the internal medications given during the courses are mentioned in tables-4,5,6 and 7.

Table -1: Timeline of the case:

Date	Relevant medical history and examination
2018	H/o Myocardial infarction, underwent Angioplasty and on T. Ecospirin 1 at noon and T.Concor once daily.
2/2019	Sacroiliac joint pain associated with pain and numbness of both lower limbs below knee
8/2019 (6 months later)	Weakness of both lower limbs with muscle wasting, loosening of chappals, imbalance. Consulted ortho. Advised surgery
11/2019	Took 1 st course of Ayurvedic treatment <i>rukshana, sneha-sweda, vasthi and shashtikashalilepa</i> for 1 month; pain and weakness reduced, muscle bulk improved.
11/2020	2 nd course of treatment - Achieved normal gait, motor system - normal
12/2021	Admitted for the 3 rd course

Table - 2: Systemic examination:

Locomotor system	
Sacroiliac joint bilateral examination	
Palpation	Tenderness- Grade 2
Compression test	Positive

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Movements	Painful
Lumbar spine	
Palpation, L4- L5	Tenderness Grade 1
Straight leg raising test	Negative
Movements	Normal range but painful movements
Nervous system:	
Motor system - muscle tone on Rt lower limb	Hypotonic
Muscle bulk on both lower limb	Equal
Muscle power - thigh and calf muscles	bilateral Grade 4
Ankle – dorsiflexors	Right- Gr 2, Left – Gr 5
Evertors	Rt- Gr 2, Lt – Gr 4
Plantar flexors	Gr 5 bilateral
Reflex	Diminished, knee jerk and ankle jerk (+) bilateral, Plantar- no response B/L
Coordination	Tandem walking not possible

Table -3: Ayurvedic parameters:

<i>Dosha</i>	<i>Vata pradhana, kaphaanubandha [soola,supthi,sada,sosha]</i>
<i>Dushya</i>	<i>Rasa, asthi</i>
<i>Bala(strength)</i>	<i>Rogabala - Pravara, Rogi bala - Madhyama</i>
<i>Agni (digestive fire)</i>	<i>Samagni</i>
<i>Prakrithi(constitution)</i>	<i>Vata pitta, Manasika (mental) - Rajasika</i>
<i>Srothas (channels)</i>	<i>Rasavaha, mamsavaha and asthivahasrothas</i>
<i>Srotodushti type</i>	<i>Sanga</i>
<i>Site (Adhisthana)</i>	<i>Kati and Trika Sandhi</i>
<i>Sadyasadyata (prognosis)</i>	<i>KrichraSadhya</i>
<i>Roganirnayam(Diagnosis)</i>	<i>Khanja</i>

Table - 4: Internal medications:

Medicines	Rationale
<i>Gandharvahasthadikwatha^[4]- 90 ml at 6 am</i>	<i>Pacifies vata dosha, agnideepana and anulomana.</i>
<i>Erandasukumarataila^[5]- 5 ml with kwatha morning</i>	<i>amahara, vatahara and anulomana</i>
<i>Sahacharadikashaya^[6] – 90 ml at 11am, 6 pm</i>	<i>vatakaphahara, vedanashamakaavaranaahara, acts onadhakaya</i>
<i>Tab. Ekangaveera rasa ^[7] 125 mg 1-1-1 after food</i>	<i>pacify vitiated Vata Dosha located to ekanga</i>
<i>Dhanwantharataila^[8] mezhupaka – 5 ml with kwatha evening</i>	<i>Vatahara, rasayana</i>

Table- 5 : Timeline of Treatment - First course - From 14-11-2019 to 13-12-2019:

Days	Procedure	Rationale
1-8	<i>Dhanyamladhara^[9] – full body</i>	<i>Rookshan, Swedana</i>
9-18	<i>Patrapotalasweda^[10] withsahacharaditaila</i>	<i>Sneha sweda</i>

	+Kativasti with murivenna	
19	Matravasthi –Dhanwantharatailamezhupaka 30 ml	Anulomana, vatahara
20-24	MusthadiRajayapanavasthi ^[11]	Yapana, Vatahara Balya, sulanasana
25- 31	Shashtikalepa ^[12] (adhakaya)	Brimhana Adhakayavatahara

Table -6: Second course - From 12-11-2020 to 03-12-2020:

Days	Procedure	Rationale
3- 9	Dhanyamladhara – full body for 7 days	Rookshana, swedana
10-16	Kayasekam/ Pizhichil ^[13] with sahacharaditaila – 7 days	Sneha sweda
17-19	Matravasthi ^[14] withDhanwantharatailamezhupaka – 90 ml – 3 days	Anulomana, Balya, vatahara
20-26	MusthadiRajayapanavasthi [Dhanwantharataila, Indukanthamghrita]– 7 days	Yapana ,Vatahara Balya, sulanasana
27-31	Kativasthi - 5 days	vatahara

Table-7: Third course -From 23-09-2021 to 9-10 -2021:

Days	Procedure	Rationale
3- 5	Dhanyamladhara – full body for 3 days	Rookshana, swedana
6 - 10	Kayasekam with Dhanwantharataila – 5 days	Sneha sweda
11 - 17	Shashtikashalilepa + Matravasthi with Dhanwantharatailamezhupaka	Anulomana,Balya, brimhana, vatahara

Table -8: Discharge medicines for 1 month:

Medicines	Rationale
Adari Sahacharadi kashaya ^[15] – 90 ml 6am, 6 pm	Vataharaon lower body
Dhanwantharamtailamezhupaka – 5 mlwithkashaya	Vatakapha hara
Vatagajankusa rasa ^[16] 1-1-1	Vata Pradhana Tridosha Samaka, Rasayana
Shashtikataila - massage on lower limbs	Balya, Dhatupushtikara, and Brimhana

Table-9: Outcome Assessment:

Treatment	Pain – S.I Joint & lower limb	Weakness, Foot drop Right	Numbness	Walking difficulty and loosening of chappals
Base line – November 2019	Moderate	Right ankle dorsiflexion – Gr: 2	Both lower limb below knee	High stepping gait, loosening of chappals, imbalance in walking
December 2019 (after 1 month)	Mild	Gr : 3	Foot only	Reduced difficulty
December 2020 (after 2 nd course)	No pain	Gr : 4	Reduced on foot	Normal gait, no loosening, no imbalance, Muscle bulk improved.

December 2021 (after 3 rd course)	No pain	Gr : 4	On soles	Normal gait, no loosening, no imbalance
Follow up in 2023	No pain	Gr.4	Numbness reduced	Normal gait, no loosening, no imbalance

Table -10: Swiss Spinal Stenosis Questionnaire:

	Before treatment	After course	1 st	After 2 nd course	After 3 rd course
Symptom severity score	27	17		12	10
Activity score	16	11		7	7
Treatment satisfaction score	23	14		8	7
Total Disability in percentage	83.5 %	53.16%		34.17%	30.3%

DISCUSSION:

The condition *Khanja* mentioned under the spectrum of *vatavyadhi* is considered here as the presentation was dominant in one lower limb. As the presentation was weakness of lower limbs and associated walking difficulty (*skhalithagati*) the terms *Pakshaghata* and *Kaphaavritha vyana*^[17] can be considered. All these conditions manifest due to the vitiation of *vata dosha* leading to *sosha* of *sira*, *snayu*, *kandara*, etc. leading to the presentation where Ayurveda management is effective. Considering the *kaphaavarana*, *rukshana* is selected for management as first line. As there was wasting (*sosha*), *brimhana* therapy followed. The line of treatment mentioned in Ayurvedic classics for *Vatavyadhis* are repeated *sneha-sweda* which is done in this case.

CONCLUSION:

Ayurvedic treatment protocol of *vatavyadhi* comprising of *rookshana*, *snehana-swedana*, *vataanulomana*, *brimhana*, *yapana* and *rasayana* is found to be having very effective role in relieving the symptoms of lumbar canal stenosis associated with Peroneal neuropathy. Scope of managing challenging neurological conditions by

following the Ayurvedic principles can be explored more.

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Limitation of study:

Large sample size study should be conducted to validate the data.

Consent of patient:

Obtained for treatment and publication of case.

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