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Ayurvedic management of *Gridhrasi* with special reference to Sciatica: A Case Study

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ABSTRACT

Background: Low back pain is one of the most common complaints in India that affects 70% to 80% of the population. Among the various causes of low back pain, the intervertebral disc prolapsed is the most common and the pain may be confined in the lower back only or referred to as a leg, buttock or hip which often outline the features of Sciatica syndrome. In Ayurvedic Science, the disease Sciatica can be compared with *Gridhrasi* which is one of the most common disorders of *Vata*. **Aims & Objectives:** This study aimed to access the efficacy of Ayurvedic management including *Shodhana* and *Shamana Chikitsa* in *Gridhrasi*. **Materials and Methods:** It is a single case study. A 40-year married man has already been diagnosed with a bulge with superimposed right paracentral protrusion of L4-L5, correlated with *Ghridrasi* of the right leg from 5 months approached to Ayurvedic hospital. He was treated with Panchakarma treatment including *Yoga Basti*, *Kati Basti* along with *Shamana Chikitsa* for one month. **Results:** Symptomatic assessment of patient was carried out after one month and satisfactory outcome was there and overall quality of life of patient was significantly improved. **Conclusion:** The aforementioned therapy gives symptomatic relief for the management of *Gridhrasi*.

Key words: *Ghridrasi*, *Sciatica*, *Yoga Basti*, *Kati Basti*, *Shamana Chikitsa*.

INTRODUCTION

Low back pain is one of the most common complaints in India that affects 70% to 80% of the population. Among the various causes of low back pain, the intervertebral disc prolapsed is the most common. In 95% of the lumbar disc herniation, L4-L5 and L5-S1 discs are most commonly affected and the pain may be confined in the lower back only or referred to as a leg, buttock or hip which often outlines the features of Sciatica syndrome.^[1] According to epidemiological studies, the lifetime incidence were reported between

10% to 40% and annual incidence of 1% to 5%. The prevalence varies considerably ranging from 3.8% in the working population to 7.9% in the non-working population.^[2] It is more common in men between the ages of 40s and 50s and men are more commonly affected than women.

Sciatica is a debilitating condition that is the result of sciatica nerve root pathology in which the affected patients experience pain and paresthesias in the sciatica nerve distribution and cause difficulty in walking. Sometimes it interferes with a person's daily activities because of its intensity and deteriorates the quality of life. The pain is usually exacerbated by twisting, bending or coughing. Treatment usually involves the use of analgesics, muscle relaxants, pain control anticonvulsants and NSAIDs to decrease inflammation.^[3,4]

In Ayurvedic science, the disease Sciatica can be compared with *Gridhrasi* which falls under the *Nanatmaja Vataja Vikara*.^[5] *Gridhrasi*, the name itself indicates the way of gait shown by the patient (walks like a *Grudhra* (vulture) due to severe, persistent and migrating pain. The cardinal features of *Gridhrasi*

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(*Vataja* type) are - *Ruk* (pain), *Toda* (pricking sensation), *Muhuspananda* (tingling sensation), *Stambha* (stiffness) in the *Sphik, Kati, Uru, Janu, Jangha* and *Pada*^[6] region and *Sakthikshepanigraha* (i.e., restriction in the upward-lifting of lower limbs).^[7] *Tandra* (drowsiness), *Gaurav* (heaviness) and *Aruchi* (anorexia) is seen in *Vata-Kaphaja Gridhrasi*.^[6] Ayurvedic management of Gridhrasi (sciatica) involves *Bastikarma, Siravyedha* and *Agnikarma*.^[8] In this case study, *Yoga Basti, Kati basti* along with *Shamana Chikitsa* have been advised.

CASE REPORT

A 40-year married male came to Panchakarma OPD of BVVS Ayurved Medical College and Hospital, Bagalkot with complaints of pain in the lower lumbar region radiating to the right lower limb from three months. He also had complaints of stiffness in the lower back region from two months and feeling difficulty while walking for 100 meters from one month. These symptoms were associated with reduced appetite from three months, gaseous distension of abdomen from two months, constipation and general weakness from one month.

The patient hailed from a Lower middle-income family from Bagalkot. His occupation was a Riksha driver. He had asymptomatic for the past three months and suddenly developed a mild pain in the lower lumbar region. It was managed with symptomatic allopathic treatment. Later he again gradually developed pain in the lower lumbar region and then gradually radiates to the posterior aspect of the thigh, knee, calf region and foot of the right leg from three months. Gradually he experienced stiffness in the lower back region from two months, feeling of tingling sensation in the right leg, heaviness and difficulty while walking for 100 meters from one month. He was admitted to the IPD of the Panchakarma male general ward after careful examination.

He has neither traumatic nor any other past medical and surgical history. None of the family members had a history of diabetes, Hypertension or IHD. The patient was a vegetarian. He has a reduced appetite. His bladder habit was normal. His bowel habits were

constipated. He has an addiction to alcohol (occasionally twice a month) and tobacco (3 – 4 times a day). His sleep was disturbed due to pain. He has continuous jerk to the low back region because of his occupation.

Clinical Findings

Table 1: Details of General Examination & Ashtavidha Pariksha

General Examination	Ashtavidha Pariksha
<ul style="list-style-type: none"> BP:130/80 mmHg PR:76/min RR:18/min Temperature: 98.6 F Wt:72 kg BMI: 25.5kg/m² 	<ul style="list-style-type: none"> <i>Nadi</i> (pulse):<i>Vata-Kaphaja</i> <i>Mala</i> (bowels): <i>Asamyak</i> (constipated) <i>Mutra</i> (urine):<i>Samyak</i> <i>Jihwa</i> (tongue): <i>Sama</i> (coated) <i>Shabdha</i> (speech):<i>Prakruta</i> <i>Sparsha</i> (skin): <i>Anushnasita</i> <i>Druk</i> (eyes): <i>Prakruta</i> <i>Akruti</i> (posture):<i>Madhyama</i>

Table 2: Details of Locomotor Examination

Locomotor Examination	
Inspection:	<ul style="list-style-type: none"> Antalgic gait, Short step. Discomfort in walking and sitting for a long duration. Restriction of Spinal and hip movements.
Palpation:	<ul style="list-style-type: none"> Tenderness 2 + at L4 – L5 region Good Muscle tone Muscle power grade both at right & left extremities (upper and lower) – 5/5
Range of movement of Lumbar spine (ROM):	<ul style="list-style-type: none"> Forward flexion of the lumbar spine is limited to 20 cm above ground Right lateral flexion is limited to 30° with pain Left lateral flexion is limited to 30° with pain

	<ul style="list-style-type: none"> Extension is limited to 10° with pain
SLR test (active):	<ul style="list-style-type: none"> Positive at 40° on the right leg Negative on the left leg.
Bragard's test:	<ul style="list-style-type: none"> Positive at the right leg. Negative on the left leg.
Radiological Investigations:	<ul style="list-style-type: none"> Broad-based bulge with superimposed right paracentral protrusion of L4 – L5 disc indenting the thecal sac and compressing the nerve root in the left lateral recess. Narrowing of bilateral neural foramina, more on the right side, by disc osteophytes complexes.

Diagnosis: *Vata-Kapha Gridhrasi* (Sciatica due to IVDP)

Therapeutic Intervention

The patient was advised of the following treatment.

1. *Shodhana* Therapy
2. *Sthanika Nirgundi Patra pinda Sweda*^[9] for 30 mins for 8 days.
3. *Kati Basti* with *Sahacharadi Taila*^[10] for 30 mins for 8 days.
4. *Yoga Basti*
 - a) *Niruha basti* with *Erandamooladi Kashaya*^[11] and
 - b) *Anuvasana basti* with *Mahanarayana Taila*^[12]
5. *Shamana* therapy
 - a) Tab. *Agnitundi Vati*^[13] 125 mg 2 tab BD, Before food, with Lukewarm water for one week.
 - b) Tab. *Trayodashanga Guggulu*^[14] 250mg 2 tab BD with *Manjishta Kashaya* Anupana 20ml for one month.
 - c) *Rasnasaptak Kwatha*^[15] 15 ml TID, After food, with Lukewarm water for one month.
 - d) *Gandharva Haritaki Churna*^[16] 10 gms, Bedtime, with Lukewarm water for one month.
 - *Pathyapathya* (diet & lifestyle regimens)
 - Usual diet. Complete rest.

- Avoid forward bending, lifting heavyweight, strenuous activity and jerk to the low back region. Abstain from alcohol, tobacco chewing.
- Follow up on the 31st day.

OBSERVATION AND RESULTS

By the end of one month of treatment, the patient had found a significant reduction in the lumbar pain, stiffness of the lower back region, tingling sensation and heaviness. The range of movement of the spine was improved well allowing him to perform his daily activities with ease. His gait was also improved. The vital records were normal. The patient got complete symptomatic relief. No radiological investigation was carried out after the completion of therapy. The subjective and objective criteria were assessed including Oswestry's Disability Index^[17] before and after treatment. The timeline of clinical findings (assessment parameters) is portrayed in table 3.

Table 3: Details of Assessment parameters before and after treatment

SN	Assessment Parameters	Before Treatment	After treatment
Subjective Parameters			
1.	Pain in the lower lumbar region radiating to the right lower limb	5 + (VAS score)	0 (VAS score)
2.	Stiffness in the lower back region	3 +	0
3.	Tingling sensation in the right leg	2 +	0
4.	Heaviness in the right leg	2 +	0
5.	Pain and difficulty while walking	3 + (VAS score)	1 + (VAS score)
6.	Appetite	2 +	0
7.	Gaseous distension of abdomen	2 +	0
8.	Constipation	2 +	0

9.	General weakness	3 +	0
10.	Sleep	2 +	0
Objective Parameters			
1.	ROM of the lumbar spine		
	1. Forward flexion	20 cm above ground	15 cm above ground
	2. Right lateral flexion	30° with pain	30° without pain
	3. Left lateral flexion	30° with pain	35° without pain
	4. Extension	10° with pain	20° without pain
2.	SLR test (active)		
	1. Right leg	Positive	Negative
	2. Left leg	Negative	Negative
3.	Bragard's test		
	1. Right leg	Positive at 40°	Negative
	2. Left leg	Negative	Negative
4.	Gait	Antalgic gait	No Antalgic gait

DISCUSSION

Ayurvedic management of Gridhrasi (sciatica) involves *Bastikarma*, *Siravyedha* and *Agnikarma*. In this case, *Shodhana Chikitsa* with *Basti Karma (Yoga Basti)*, *Kati Basti* along with *Shamana Chikitsa* protocol has been advised.

Patra Pinda Sweda is a type of *Sankara Sweda*. It is an unparalleled treatment for painful conditions mainly caused by *Vata Dosha* and *Vatakapha Dosha* owing to the properties of ingredients used. It is mainly used to relieve pain, swelling, inflammation and stiffness associated with bone, joint and or musculoskeletal pain.^[9,18] *Gridhrasi* is *Vata Kaphaja Pradhana* disease. *Vedanasthapana*, *Vata Shamaka* (analgesic),

Shothahara (anti-inflammatory) and *Dhatuposhaka* properties (strengthening and nutritive therapy) of *Nirgundi Patra Pinda Swedana* can help improve muscle tone and tissues function by increasing blood circulation, facilitating the release of toxins, reducing inflammation, strengthening the joints, muscles and nerves (by reducing compression of the nerve root) in the affected area and that may result in relieving the symptoms of *Gridhrasi* such as *Ruk* (radiating pain) *Muhuspandana* (tingling sensation) and *Stambha* (stiffness) which in turn improves the range of motion in Spine.

Kati basti is a type of *Snigdha Swedana* and is mainly used for low backache and lumbosacral disorders. It increases regional circulation, nourishes and strengthens muscles and nerves and thus helps relieve pain, stiffness, spasm and restore flexibility. In this case, there is degeneration of the intervertebral disc and the lubrication function of *Shleshaka Kapha* is affected, leading to compression, irritation or inflammation of *Gridhrasi Nadi* (sciatica nerve) resulting to severe pain. So, the local *Snehana* and *Swedana* are very effective and provide quick results because they do act at the site of *Samprapti*. *Sahacharadi Taila* has *Snigdha Guna* and *Ushna Virya*, *Vata Kaphahara* but overall it is *Tridoshaghna* and is very effective in *Adha Kaya Vatarogas*. It is having specific property of *Gati Viseshatvam* (helps to move) due to its *Madhura* and *Tikta Rasa*. Its *Vatahara*, *Bruhana* (nourishing) and *Pachana* properties, anti-inflammatory and analgesic action^[10] can help alleviate inflammatory changes in the nerve and possibly to reduce symptoms of nerve root compression. The use of the *Kati basti with Sahacharadi Taila* at L4-L5 region is more effective in controlling *Kapha* dominance *Gridhrasi* symptoms such as *Stambha* (stiffness), *Gaurava* (heaviness) and *Tandra* (tingling sensation) and also on walking distance and the magnitude of Pain.

Basti Chikitsa is considered to be a prime treatment modality for *Vata dosha* and is also quoted as *Ardha Chikitsa* by Acharya Charaka.^[19] Pharmacokinetic studies have also confirmed that drugs administered via rectum can reach higher blood levels than oral

route due to partial avoidance of hepatic first-pass metabolism. *Erandamoola* is said to be a *Shreshta Vatahara Dravya*. It has *Vata-Kaphahara* properties, anti-inflammatory, anti-oxidant, central analgesic, antinociceptive and bone regeneration activity.^[11,20] *Erandamuladi Niruha Basti* is indicated in *Trika, Prishtha Shoola* (pain in the low back) and acts as *Maruta Nigraha* (controls *Vata*). It is also indicated in the *Kaphavrita* condition (*Kapha Avarana* over *Vata* due to protrusion), where it plays a major role in pacifying the *Kapha Dosha* and reducing *Gridhrasi* symptoms such as *Stambha* (stiffness) and *Gaurava* (heaviness). *Mahanarayana taila* has anti-inflammatory and analgesic action^[12] which may help to alleviate inflammatory changes in the nerve and may reduce the symptoms of nerve root compression. *Anuvasana Basti* with *Mahanarayana Taila* is very effective in controlling the *Vata* dominance *Gridhrasi* symptoms such as *Ruk* (radiating pain) *Muhuspandana* (tingling sensation), *Stambha* (stiffness) and also the functional ability which in turn improves a wide range of motion in Spine.

Agnitundi Vati corrects *Jatharagni* and *Dhatwagni* and is indicated in *Adhmana, Vataja Shula*.^[13] The ingredients of *Trayodashanga Guggulu* have *Vatanulomana, Aampachana, Deepana*, anti-inflammatory, analgesic, muscle relaxant and antioxidant properties^[21,22] of that help relieve malabaddata (constipation), *Gauravata, Aruchi*, radiating pain, tingling sensation, stiffness etc. which in turn improves the range of motion in Spine. *Rasnasaptak Kwatha* is having an excellent *Vata-Kapha Shamaka* properties along with *Aampachana* and is *Mridu Virechaka*. It has anti-inflammatory activity, analgesic and anti-arthritis activity, immunomodulatory activity and antioxidant activity.^[23] *Gandharva Haritaki Churna* is a *Vatahara, Vrishya* and *Snigdha Virechaka* properties and is indicated in pain management in *Vatavyadhi, Sandhivata, Gridhrasi* and *Ardita*.^[16]

Considering all of the above, the overall effect of all planned treatments on this patient this patient induces *Vedanasthapana, Vata Shamaka* (analgesic), *Shothahara* (anti-inflammatory) and *Dhatuposhaka*

properties (strengthening and nutritive therapy) can help provide a significant improvement in the symptoms of *Gridhrasi* and also the functional ability which in turn improves the range of motion at the Spine.

CONCLUSION

Sciatica is a major cause of morbidity that makes a person to be disabled from daily activities. This case study showed that *Shodhana* and *Shamana Chikitsa* were very effective in the management of *Gridhrasi*. It has provided significant improvements in subjective and objective parameters indicating that the patient has improved in presenting the features and significant improvement found in the patient's quality of life. The patient is doing well with his daily activities to date. The findings in this single case study have provided a strong hope and a choice for better management of *Gridhrasi*. However, some randomized clinical trials with large sample sizes are validated to confirm results.

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