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Gridrasi (Lumbar Radiculopathy) - A Case Study

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ABSTRACT

Background: *Gridrasi* is one among the *Vataja Nanatmaja vyadi's*, which is closely related with sciatica (lumbar radiculopathy) which is characterized by pain radiating along the sciatic nerve, which runs down one/both legs from lower back. The incidence of sciatica varying from 13% to 40%. The prevalence of sciatica varies considerably ranging from 3.8% in working population to 7.9% in non-working population. **Aim and Objectives:** The aim of this study was to assess the efficacy of *Shamana Aushadi's* and *Shodhana Chikitsa* in *Gridrasi*. **Materials and Methods:** It is a single case study. A 31yr old female who was already diagnosed with herniation of L4-L5 and posterocentral protrusion of L3-L4 and L4-L5 discs. *Shamana Aushadis* followed by *Panchakarma* treatment like *Valuka Sweda*, *Patra Pinda Sweda*, *Basti*. **Results:** Symptomatic assessment of patient was carried out and satisfactory outcome was there and quality of life of patient was significantly improved. **Conclusion:** Procedure's and *Shamanaushadis* were satisfactory results and symptomatic relief.

Key words: *Gridrasi*, *Vartaka*, *Lumbar Radiculopathy*, *Shamanaushadis*, *Case Report*, *Ayurveda*.

INTRODUCTION

In today's modern day, low back pain is a common musculoskeletal complaint in most age groups. Lifestyle and nature of work are putting added tension on the usual health. The aggravating factors, such as over exertion, sedentary occupation, jerky movements during travelling, and lifting, which leads to low backache. The main cause for the low back pain is due to intervertebral disc prolapse (IVDP). Under IVDP, Lumbar radiculopathy (sciatica) is the main disease observed. Sciatica represents a debilitating condition characterized by pain or paresthesia within the sciatic nerve distribution or an associated lumbosacral nerve

root. In 95% of the lumbar disc herniation, L4-L5 and L5-S1 discs are most commonly affected.^[1] Sciatica does not only cause pain but causes difficulty in walking as well and impacts the quality of life in a negative manner.^[2] It is a very painful condition where the pain emanates from the lumbar region and then radiates along the posterior lateral aspect of the thigh region, right down to the toes.

The prevalence of sciatica varies considerably ranging from 3.8% in the working population to 7.9% in nonworking population.^[3] The signs and symptoms of "Sciatica" found in modern medicine are quietly mimic with the condition of *Gridhrasi* mentioned in Ayurveda. *Gridhrasi* comes under *Nanatamja Vata Vyadhi*.^[4] The name *Gridrasi* indicates the gait of the patient like a *Grudhra* (vulture) due to extreme pain. According to *Acharya Charaka*, the cardinal signs and symptoms of *Vataja Gridhrasi* are *Ruka* (pain), *Toda* (pricking sensation), *Muhuspandana* (tingling sensation), *Stambha* (stiffness). In *Gridhrasi*, *Tandra* (Drowsiness), *Gaurav* (Heaviness), and *Aruchi* (Anorexia) may be present if *Kapha* is associated with *Vata*.^[5] *Acharya Sushruta* has also mentioned *Sakthishepana Nigrahanti*^[6] (i.e., restriction in upward lifting of lower limbs). The management provided by the

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contemporary medicine for this condition is either conservative or surgical in nature.^[7] Surgery is an expensive therapy; there is great need to find out effective management of *Gridhrasi in Ayurveda*. In this case study, a 31-year-old female with IVDP in lumbar region was prescribed for different *Shamana Chikitsa* and *Shodhan Chikitsa*, which resulted in excellent symptomatic relief.

MATERIALS AND METHODS

It is a single case study. Informed consent was taken from the patient in his own language.

History of Present Illness

Demographic detail of the patient is mentioned in Table 1. A 31-years-old women was apparently healthy before seven months, on one fine day she lifted the huge luggage till 3rd floor, then she started complaints of pain in lower back region which is radiating to thigh, knee, calf region, and foot of right leg since seven months and right leg swollen initially and she also had complaints of numbness, stiffness and tingling sensation of right leg since six months, heaviness in both legs and difficulty to walk and bending forward since five months, these chief complaints are briefly mentioned in Table 2. Associated with the complaint of disturbed sleep due to severe pain.

Table 1: Demographic details

Name:	XYZ
Age:	31 years
Gender:	Female
Address:	Keshwapur, Hubli
OPD:	17670
IPD:	591
Occupation:	Private job
Marital status:	Unmarried
Socioeconomic status:	Middle class
Weight:	61kg

Height:	5.3 feet
Body mass index (BMI):	23.8kg/m2 (Normal)

Patient had taken contemporary medicines initially for 3 days and pain did not subside and patient went to orthopaedic doctor and neurologist, they advised MRI, which had a impression of posterior and right paracentral herniation of L4-L5 and posterocentral protrusion of L3-L4 and L4-L5 discs. In modern medicines they advised for surgery but the patient was not ready with surgery. So, she approached to Kayachikitsa OPD, Ayurveda Mahavidyalaya, Heggeri, Hubli, Karnataka, India, for Ayurvedic treatment, and all her previous medicines were advised to stop and Ayurvedic management with *Shamana* and *Shodhana Chikitsa* was prescribed. Examination of the patient including Vitals examination, *Ashtasthana Nirikshana* and specific locomotor system examination are mentioned in Table 3, 4 and 5 respectively.

Table 2: Chief complaints

SN	Chief Complaints	Grade	Duration
1.	Pain in lower back region radiating to right leg	7+ (VAS score)	Since 7 months
2.	Difficulty and pain while walking and bending forward	6 + (VAS score)	Since 5 months
3.	Stiffness in lower back region and right leg	3 +	Since 7 months
4.	Heaviness in right legs	3 +	Since 6 months
5.	Tingling sensation in the right leg	2 +	Since 6 months

Table 3: Ashtasthana Niriksha

<i>Nadi</i> (pulse)	74/min
<i>Mala</i> (stool)	<i>Prakruta</i> - once in a day with normal consistency
<i>Mutra</i> (urine)	Samyak - 5/6times a day 0 times at night

Jeeva (tongue)	Saam (coated)
Shabda (speech)	Prakruta
Sparsha (skin)	Prakruta
Druka (eyes)	Prakruta
Akruti (posture)	Madhyama

Table 4: Vital examinations

Blood pressure (B.P)	120/70mm/Hg
Pulse (P)	74/min
Respiratory rate (RR)	18/min
Heart rate	74/min

Past History

- Jerk to low back region while traveling for long distance.
- No history of trauma or fall.
- No history of major medical illness (e.g., HTN/DM/bronchial asthma/dengue).
- No any surgical intervention

Medication History

Patient had taken medicine (Pregalift NT, Tarovit, T Bonecare-C, Tapfree ER 50, Diclonex gel) for low back pain for 5 months.

Personal History

Food habits: mixed diet, weekly 2 times non-veg

Sleep: disturbed sleep due to pain

Micturition: 5-6 times/day, 0 times at night

Bowel: once a day, normal consistency

Family History

Not significant

Nidana Panchak

Hetu: Atibhara, prolong sitting, travelling

Purvarupa: (prodromal symptoms): stiffness and pain in lower back region

Rupa: stiffness, low back pain radiating to right leg

Upashaya: Rest in left lateral position

Samprapti: Due to travelling, prolong sitting which leads to vitiation of Vata and Kaphaja Doshas along with vitiation of Rakta (blood), Sira (veins), Kandara and Dhamani (arteries). This ultimately causes obstruction to the neural conduction (Vatavahini Nadi) and elicited as radiating pain from Kati (lumbar region), Prushta (back), Uru (thigh), Janu (knee), Jangha (calf), and Pada (foot), and leads to generation of Gridhrasi (sciatica).

Table 5: Examinations specific to diagnosis Locomotor system examination.

Inspection - Limping gait
<ul style="list-style-type: none"> ▪ Discomfort in walking and sitting for long duration ▪ No localized swelling ▪ No varicosities ▪ Reflexes are intact.
Palpation - Tenderness 2 + at L4-L5 region
<ul style="list-style-type: none"> ▪ Muscle tone - good ▪ Muscle power grade—right extremities (upper and lower) - 5/5 ▪ Left extremities (upper and lower) - 5/5
Range of movement of Forward flexion of lumbar spine is not possible
Lumbar spine (ROM)
Right lateral flexion is limited to 20° with pain
Left lateral flexion is limited to 30° with pain
Extension is limited to 10° with pain
Special test SLR (active): Right leg: positive at 20°, Left leg: Negative
Bragard’s test: positive at right leg

Samprapti Ghatak

Dosha: Vata and Kapha

Dushya: Rasa, Rakta, Asthi, Majja, Sira, Kandara, and Snayu

Srotas: Rasavaha, Asthivaha, Majjavaha, and Purishavaha

Srotodushti: Sanga

Rogamarga: Madhyama

Agnimandya: Ama, Jathargnimandya, and Dhatvagnimandya

Udbhavasthana: Pakvashaya

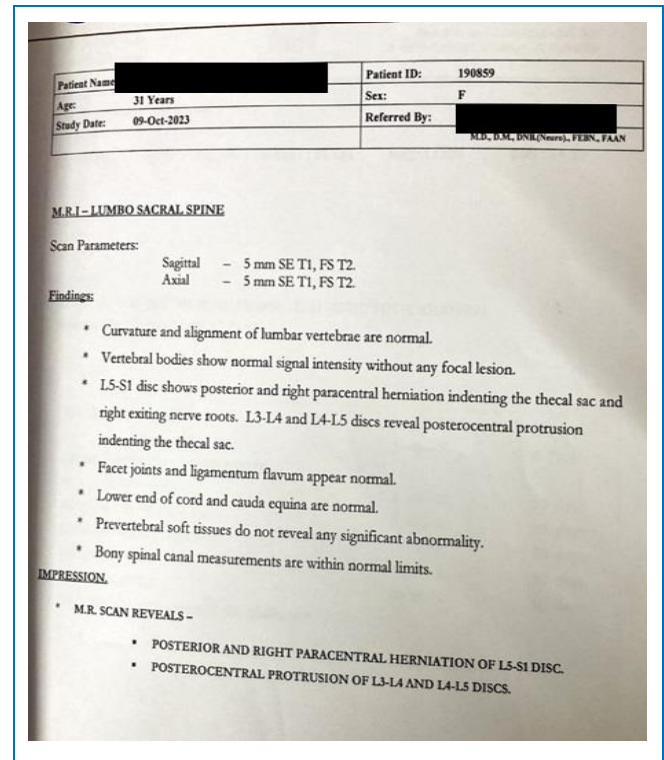
Adhishtana: Kati and Prushthavamsha

Vyaktasthana: Sphik, Kati, Prushtha, Uru, Janu, Jangha, and Pada.

Diagnosis: Vata Kaphaja Gridhrasi (Lumbar radiculopathy due to IVDP)

Investigations

Done Magnetic resonance imaging (MRI) Lumbosacral spine dated on 9th October 2023 reveals posterior and paracentral herniation of L5-S1 disc postero-central protrusion of L3-L4 and L4-L5 discs.



Treatment Advised

By analyzing the above pathogenesis of disease in this patient treatment plan was *Shamana Chikitsa* along with *Shodhana Chikitsa*.

Shamana Chikitsa

SN	Drugs	Dose	Time of Administration	Anupana	Duration
1.	Maharasnaya garaja Guggulu Kashaya	15ml BD	After food	Ushnajala	1 month
2.	Kaishora Guggulu	1 TID	After food	Ushnajala	1 month
3.	Vatsanabha Yoga	½ BD	After food	Ushnajala	1 month
4.	Sameera Punnaga Rasa	1 BD	After food	Ushnajala	1 month
5.	Shallaki Yoga	1 BD	After food	Ushnajala	1 month
6.	Gokshuradi Guggulu	1 BD	After food	Ushnajala	15 Days

Shodhana Chikitsa

SN	Procedure	Drugs	Duration
1.	Sarvanga Valuka Sweda followed by Nadi Sweda	Valuka	7 Days
2.	Sarvanga Abhyanga followed by Sarvanga Sweda	Murivenna Taila and Kottamchukkadi Taila	7 Days
3.	Virechana	Eranda Bharjita Vartak D1- No of vegas -8 D2- No of vegas-6	2 Days
4.	Patra Pinda Sweda	Eranda, Shigru, Agnimantha, Sarshapa Taila	7 Days
5.	Niruha Basti followed by	Honey (30ml), Saindhava Lavana (5gms), Guggulutiktaka Ghrita (30ml), Taila (30ml), Rasna and Guduchi Churna (5+5gm), Gandharvahastadi Kashaya (25ml), Sahacharadi Kashaya (75ml), Ushna Jala-350ml Total quantity - 550	Kala Basti (16 days), started with Niruha Basti and ended with Anuvasana Basti, alternative Basti was given
6.	Anuvasana Basti	Guggulutiktaka Ghrita (30ml), Murivenna Taila (30ml)	8 basti

Table 6: Details of Assessment parameters before and after treatment

Subjective Parameter

SN	Assessment parameter	Before Treatment	After Treatment
1.	Pain in the lower lumbar region radiating to the right lower limb	7+ (VAS score)	3 (VAS Score)

2.	Stiffness in lower back region and right leg	3+	0
3.	Heaviness in right legs	3 +	0
4.	Difficulty and pain while walking and bending forward	6 + (VAS score)	3
5.	Tingling sensation in the right leg	2+	0
6.	Sleep	3	1

Objective Parameter

SN	Examination	Before Treatment	After Treatment
1.	ROM of the lumbar spine		
	▪ Forward flexion	No possible	Possible 20cm above ground
	▪ Right lateral flexion	20° with pain	20° without pain
	▪ Left lateral flexion	30° with pain	35° without pain
	▪ Extension	10° with pain	20° without pain
2.	▪ SLR test (active)		
	▪ Right leg	20° Positive	60°
	▪ Left leg	Negative	Negative
3.	Bragard's test		
	▪ Right leg	Positive at 20°	Positive at 60°
	▪ Left leg	Negative	Negative
4.	Gait	Antalgic	Non-Antalgic

DISCUSSION

Vatavyadhi is generally categorized into Margavarodhajanya and Dhatukshayajanya in origin. Both these attributes are clearly visible in the causation

of sciatica syndrome. Ayurvedic management of *Gridhrasi* (sciatica) involves *Bastikarma*, *Siravyedha* and *Agnikarma*.^[8] In this case, *Shodhana Chikitsa* with *Basti Karma (Kala Basti)*, *Sarvanga Valuka* and *Nadi Sweda*, *Patra Pinda Sweda* along with *Shamana Chikitsa* protocol has been advised. *Sweda* is the *Mala* of the *Medo Dhatu* described in *Ayurveda*. *Charaka* includes *Sweda* in the *Shadvidhopakrama*.^[9] *Sweda* relieves stiffness, heaviness, coldness, and produces sweating.^[10]

Gridhrasi is *Vata Kaphaja Pradhana* disease. *Vedanasthapana*, *Vata Shamaka*, *Shothahara* and *Dhatuposhaka* properties of *Patra Pinda Sweda* can help improve blood circulation, muscle tone and tissues function 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. In this case, 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.

Murivenna Tailam contents *Nagavalli Patra*, *Shigru Patra*, *Ghrita Kumara*, *Palandu*, *Shatavari*, coconut oil help in the effective management of the joint pain, muscle pain, backache and conditions like lumbar radiculopathy, spondylosis, arthritis and slip disc. *Murivenna Taila* is made into the *Madhyama Paka* and administered internally. *Kottamchukkadi Taila*^[11] contains *Kusta*, *Vacha*, *Shigru*, *Lashuna*, *Himsra*, *Devadaru*, *Sarshapa*, *Rasna*, *murchita Tila Taila*, *Chincha Rasa*. The overall properties of the drugs used are *Tikta* (bitter), *Katu* (pungent) dominant *Rasa* (taste), *Laghu* (light), *Ruksha* (dry) in nature, *Ushna* (hot) *Virya* (potency), *Katu Vipaka* (post digestive taste) and showing *Sandhigatavata*, *Gridhrasi*, *Kaphavataja*, *Vataja* disorders and *Amavata* relieving action along with analgesic, anti-inflammation, antioxidants, antispasmodic, antiarthritic, immunomodulator

activity. It is indicated in all *Vataja* disorders. It acts like *Lekhana* (Scraping), *Srotoavarodhagna* (clears obstruction of channels), *Vedanasthapna* (subsides pain), *Shothahar* (reduce swelling) etc. Due to its properties, it acts as *Aama Pachaka* (improves digestion power and digest the toxins released from undigested food). Many of the ingredients produce *Lekhaniya*, *Shothahara* and *Shoolahara* (analgesic) effect.

Eranda Bharjita Vartak^[12] (*Mrudu Virechana*), Medium sized *Vartaka* (brinjal) were baked in *Gandharvahastadi Eranda Taila* until get softened and given to eat on empty stomach with pinch of *Saindhava Lavana* and little amount of *Guda* (for taste).

Patra Pinda Sweda is a type *Shankara Sweda* in which *Swedana* is done by *Pottali* (Bolus) made up of leaves of medicinal plants. The medicinal leaves taken in *Patra Pinda Sweda* mainly having *Ushna Virya* properties, so pacify the vitiated *Vata* and *Kapha Doshas*. *Swedan* usually relieves *Stambha*, *Gourava* and *Sheetata* of the body.^[13] It is mainly used to relieve pain, swelling, inflammation and stiffness associated with bone, joint and or musculoskeletal pain.

Basti admiration of *Basti Dravya* via *Basti Netra* into the *Antra*, *Dravya* reaches whole *Antra* and enter into the *Pakvashaya*. Part of *Jataragni* present in the *Pakvashaya* as *Katu Avastapaka* takes place here. This little *Agni* has only *Shoshana* property and avoids any complex digestion chain formulation. Finally, the *Basti Dravya* reach in the *Pakvashaya* and the *Virya* of the *Basti* medicines spreads all over the body through micro and macro channels. *Adhogami Dhamanis* present in absorbed the *Virya* and carry it to *Urdhagami* and *Tiryakgami Dhamanis*.

In *Gridhrasi* the main *Dosha* involved is *Vata* and *Kapha*. Eliminating them from *Pakwasaya* and attaining *Apanavata Anulomana*, *Agni Deepanam* and *Pakwasaya Sthita Dosha Nirharana* is the main purpose of administering *Niruha Basti*.^[14] Here *Kashaya* used are *Gandharvahasadi Kashaya* and *Sahacharadi Kashaya* and *Sneha* used are *Guggulu Tiktaka Gritha* and *Murivenna Taila*.

Gandharvahasthadhi Kashayam normalizes *Vata-Kapha Doshas* and it has *Anulomana* property. Majority of contents possesses anti-inflammatory action mainly *Punarnava* and *Gandharvahastha*. *Chirivilwa*, *Viswa* and *chitraka*, reduces *Aamavastha* via their *Deepana* (carminative) and *Pachana* properties. *Sahacharadi Kashayam* is a simple formulation of 3 drugs found in the texts of *Ayurveda* and is highly effective in management of *Sciatica*. It addresses *Vata* disorders like joint pain, osteoarthritis, rheumatoid arthritis etc. Anti-inflammatory and anti-arthritic action of this medicine helps to alleviate the various symptoms including improving the blood circulation in the affected areas, body pain and debility.

Before treatment



After treatment



CONCLUSION

As per the *Ayurvedic* treatment principle, *Shodhana* with *Snigdha Mridu Virechana* followed by *Basti* is the line of treatment of *Vata* situated in *Adhobhaga*.^[15] The

overall effect of the aforementioned therapy reveals that lumbar radiculopathy can be cured effectively with collaborative approach of various *Panchakarma* procedures including *Niruha Basti*, *Patrapinda Sweda*, *Mrudu Virechana* along with *Shamana Chikitsa* without causing any adverse event and it may be an alternative therapy for lumbar radiculopathy in current era. Now till date there is no need to patient to undergo any surgical intervention as well as there is no recurrence in symptoms. This study is about the presentation of the single case only. An attempt must be made for further exploration of effect of these *Shamanaushadi's* along with *Panchakarma* therapies in large population for establishing standard treatment protocol. To combat the disease in minimum duration, we have used multi treatment approach to get synergistic effect.

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