



Ayurvedic management of *Gridhasi* (Sciatica)

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Abstract:

The most common disorder which affects the movement particularly in the most productive period of life is low back pain, out of which 40% of patients suffers from severe pain which comes under the umbrella of Sciatica-syndrome. With the advancement of busy professional and social life, improper sitting posture, over exertion, jerking movements during traveling and sports; increasing tendency of computerization and also because of increasing body weight, mental stress creates undue pressure on the spinal column and play an important role in producing low backache and Sciatica. The signs and symptoms found in “Sciatica” in modern contemporary medicine are similar to the condition *Gridhrasi* mentioned in Ayurveda. *Gridhrasi*, which is one among the eighty *Nanatamja Vyadhi* is very commonly seen in clinical practice As *Vasti Chikitsa* is said to be as best treatment remedy for *Vatvyadhi*. Present study is undertaken to evaluate the effect of Ayurvedic management having *Shodhana* and *Shamana* therapy *Gridhasi*. A male patient suffering from above ailments having low back pain, radiating pain from lumber, gluteal region to left leg; difficulty and pain while walking, stiffness in lumber region was admitted in Ayurvedic Hospital and specific Ayurvedic treatment including *Erandmooladi Vasti*, *Kativasti* with *Patra Pinda Sweda* (fomentation with medicated leaves) along with medications such as *Maharasnadi Qwath* and *Sunthisidhha Eranda* oil was prescribed to him. All these treatment were continued for 1 month. Outcome of these treatments was found to be very positive. After completion of therapy, there was substantial recovery in walking duration and movements of lower extremities and pain relief was observed. This approach may be useful for clinical practices and further studies on treating Sciatica. Ayurvedic management done by using collaborative approach of *Shodhana* and *Shamana Chikitsa* can effectively manage *Gridhasi* which arises due to lumber disc ailments such as IVDP by doing pain management and good performance in daily activities and ultimately improving quality of life of patient.

Keywords: *Gridhasi* ,IVDP, *Shodhana Chikitsa* ,*Shamana chikitsa* Erandmooladi Vasti, Quality of life.

Introduction:

Sciatica is a disease having symptoms such as pain, numbness, tingling and weakness starting from the low back and or buttocks and radiating towards the foot through the back of the thigh, knee joint and leg when one or more of the nerve roots forming the sciatic nerve or the sciatic nerve alone is either compressed or irritated. It is observed to be very prevalent throughout the world ranging from 1.2% to 43% [1]. The life time

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incidence of sciatica varies from 13-40% while the annual incidence of an episode of sciatica can be between 1% to 5% [2]. It is most common during peoples 40s and 50s and men are more frequently affected than women. Low back pain has been cited as fifth most common cause for hospitalization [3] and the third most frequent reason for a surgical procedure. In this way, this disease is now becoming a significant threat to the working population.

Gridhasi comes under 80 types of *Nanatmaja Vyadhi* (having involvement of one *Dosha* only) [4]. The term *Gridhrasi* indicates the typical gait that resembles of *Gridhra* i.e. vulture. The cardinal signs and symptoms of *Gridhrasi* are pain with pricking sensation, stiffness and repeated twitching in the buttocks, low back region, thigh, back of knee, calf region and foot. In *Gridhrasi* drowsiness, feeling of heaviness and anorexia may be present if *Kapha* is associated with *Vāta*[5].

Among the *Pañchakarma*, *Vasti Karma* is such a *Chikitsa* that is applicable in all the *Vatavyadhi*. According to *Sushruta*, it can also be used in *Kaphaja* and *Pittaja* disorders by using different ingredients.

There is much limitations for wide acceptance of surgical treatment presently available for this ailment in contemporary science due to fear it. Ayurveda offers us good alternative treatment protocol to manage such entity. By taking into consideration more prevalence rate of *Gridhasi*, there is a great need to find an effective remedy. Hence through the case study is an effort to highlight the efficacy of Ayurvedic treatment in Sciatica.

History of present illness:

A 62 years-old male patient (O.P.D.No. 17000894) was apparently normal before 3 years. Gradually he was suffered from severe lumber pain which was followed by radiating pain from lumber, gluteal region radiating to left leg, difficulty and pain while walking and sitting, heaviness in both legs, stiffness in lumber region and insomnia. Patient underwent for allopathic treatment but the patient got only temporary relief. After seeking advice to orthopedic surgeon, he was advised for Laminectomy. But patient was unwilling for surgery. But after worsening the symptoms, patient came to Panchakarma OPD of Mahatma Gandhi Ayurved Hospital on date 3/1/2016. Then patient got admitted on the same day for further Ayurvedic management.

History of past illness:

H/o Incision and dressing of gluteal abscess (5 yr back), no other specific medical or surgical illness.

General examination:

Nidana panchaka :

Nidana (Etiology or Causative factors)- Age related degeneration (*Dhatukshaya*), *Pravata Sevan* since having clerical job in air-conditioned office.

Aggravating factor- Constipation (bowel evacuation with straining and irregular, unsatisfactory)

*Poorvaroop*a (Prodromal symptoms)- Pain and heaviness in lumbar, gluteal and low back region.

*Roop*a (Manifestation)- Radiating pain from lumber,

Table no. 1 : Chief complaints and its duration:

1	Low back pain	since 3 years
2	Radiating pain from lumber, gluteal region to left leg	since 3 years
3	Difficulty and pain while walking and sitting	since 3 years
4	Heaviness in both legs	since 3 years
5	Stiffness in lumber region	since 3 years
6	Insomnia	Since 15 days

Table no. 2: Associated complaints and its duration:

1	Malabadhata (Intermittent Constipation –hard stool and unsatisfactory bowel evacuation)	2 months
2	Aruchi (Loss of taste)	2 months
3	Angamarda (Bodyache)	2 months

Table no. 3: Ashtavidha Pariksha

Nadi (Pulse)	70/min
Mala (Stool)	Constipation (Hard stool)
Mutra (Urine)	Samyaka
Jivha (Tongue)	Coated (Sama)
Shabda (Speech)	Spashta (Clear)
Sparsha (Touch)	Anushnasheet (Normal)
Druka (Vision)	Samyaka (Good)
Akruti (Posture)	Madhyama
Prakruti	Vatakaphaja
Body temperature	98 F
Weight	61 kg
B.P.	140/90 mm/Hg

Table no. 4: Neurological examinations

Gait	Foot drop gait
Muscle tone	Good
Muscle power Grade	Right Extremities (Upper and lower)-5/5
	Left Extremities (Upper and lower)-5/5
Reflexes	Normal
SLRT (Active)	Right- 20° +ve
	Left - 20° +ve

Table no. 5: Systemic Examination (Examination of Viddha Strotasa)

<i>Rasavaha strotasa</i>	<i>Aruchi, Aasyavairasya. Gaurav, Angamarda</i>
<i>Mansavaha strotas</i>	<i>Kriyahani (difficulty while sitting and walking)</i>
<i>Asthivaha strotas, Majjavaha strotas</i>	<i>Katigraha, Sanchari Vedana ,Katishoola</i>
<i>Purishavaha strotasa</i>	<i>Malabadhhata</i>

gluteal and low back region to left leg, difficulty and pain while walking & sitting, heaviness in both legs, stiffness in lumber region,

Samprapti (Patho-physiology of the disease):

Vitiated Vata due to *Dhatu Kshaya* (age related degenerative changes) and excess vitiation of *Apanvayu* due to excess straining while defecation, constipation (triggering factor) which leads formation of *Rukshata, Kharata (dryness)* in lumber vertebra due to vitiation of *Vata* which occurred due to *Hetu Sevana* and age related degenerative changes in spines which further results into loss of functioning of *Shleshaka Kapha* (decrease interdiscal pressure, decrease gel property, elasticity, flexibility of disc). *Kriyaalpata* of *Asthi* and *Sandhi* situated in *Kati* and *Prushata* region which results into progressive dislocation (disc prolapsed/herniation) results into *Prakshobha* of *Vatavahini Nadi* (nerve compression/irritation) ultimately elicited as radiating pain from lumber, gluteal and low back region to left leg and generation of *Gridhasi* (Sciatica syndrome). In this disease main *Dushya* are *Rakta, Kandara*[6]

Advised Investigations:

MRI lumbo-sacral spine with screening of whole spine which interprets as: S/o osteoporotic Spines with diffuse bulges of L3-L4 to L5-S1 discs with associated facetar arthropathy and ligamentum Flavum hypertrophy causing mild to moderate bilateral neural foraminal narrowing and severe canal stenosis.

Diagnosis: Gridhasi (Sciatica due to IVDP)

Chikitsa Sutra (Treatment Principle):

Chikitsa Sutra of *Gridhasi* involves *Vasti, Agnikarma, Siravyadha Chikitsa*. Out of them treatment of this patient is divided into *Shodhana Chikitsa* with *Vasti* therapy along with some *Shamana Chikitsa*[7].

Discussion:

Treatment principles applied for management of this disease condition are *Vedana sthapanaa Chikitsa*

(pain relieving treatment), *Shothahara* (anti inflammatory) and *Vata Dosha* pacifying treatment.

Sarvang snehana with *Karpooradi* oil with *Patrapinda Sweda* (PPS) and *Anuvasana* (enema using medicated oil) with *Sahachara* oil *Anuvasana* were used in above case by considering the stiffness, spasm and loss of elasticity and flexibility developed due to *Vataprakopa* (due to degeneration) in lumbar region including affected spine since these are excellent to correct *Vatadosha* which is vitiated in the body. *Patrapindasweda* which consists of medicated leaves with oil which pacifies *Vata* through their heated *pottalis* without increasing *Kapha* due to its *Snigdha* and *Ruksha Guna* was administered.

Erandamooladi Niruha Vasti with alternate *Anuvasnana* with *Sahachar* oil is used. As per Ayurvedic point of view, *Vata Dosha* is responsible for movement as well as for degradation occurs at tissue level. In sciatica, degradation occurs at thigh joints which increase pressure on sciatic nerve and result in typical symptoms of pain and difficulty in walking. Hence Sciatica i.e. *Ghridhrasi* is mentioned as a type of *Vata* disease. *Vasti* helps to remove *Kapha Avarana* over *Vata* due to edema/protrusion as well as it acts on root of *Vata* i.e. *Pakvashaya*, it relieves constipation as well as helps to relieve edema, inflammation, necrosis and make *Strotoshodhana* due to its *Vatakaphahar* properties of drugs used for *Quath* preparation of *Vasti*[10]. Classical guideline represent that *Vasti* therapy (medicated enema) is the best procedure to control and manage function of *Vata*[11]. Therefore it can be interpreted that *Vasti* therapy is an effective way to for treatment of *Ghridhrasi*.

Erandamoola is having *Tikta* and *Katu Rasa* and *Ushna Veerya* which digests the *Ama*. Due to its properties such as *Snigdha, Tikshana, Guru Guna* it pacifies the *Vyanavayu*. Due to these properties it affects as good *Vata* pacifying, nutritive and analgesic agent [12]. Its decoction is a remedy in

swellings, for pain relief in sciatica. It cures rheumatism, lumbago and various diseases of nervous system. In inflammation, it prevents protein synthesis by destroying ribosome[13].

Bala has properties to pacify *Vata* and *Pitta*, so it is useful as good nervine tonic to avoid nerve irritation and it is good one to cure muscular atrophy[14]. It contains alkaloids which have rejuvenating property. It is very efficacious in curing facial paralysis and sciatica. It contains ephedrine (alkaloid) which is sympathomimetic drug[15].

Palasha Twaka has *Tikta*, *Katu*, *Kashaya Rasa*, *Katu Vipaka* and *Ushna Veerya*. It has also anti-inflammatory action[16].

Devdaru is *Tikata*, *Katu* in *Rasa* and *Ushna Veerya*. It is helpful to relieve inflammation and pain in arthritis due to Resin in its wood and it is carminative which digests *Aama* [17].

Madhuyasti is *Balya*, *Bruhana*, *Vataghna* so it is useful in *Mansadaurbalya* and acts as a *Angamardaprashamana* action[18]. It has an anti-inflammatory and anti arthritic action[19]. Licorice contains Glycyrrhizin which inhibits prostaglandin production which is another component of inflammatory process and it has also anti-arthritic property action[20] which subside pain in sciatica. Licorice has an effect on adrenal gland which are responsible for producing cortisol. It has an adaptogenic effect of glycyrrhizin. Licorice is useful in inflammation, in spasm and contraction of body. It is natural muscle relaxer and muscle builder. By increasing cortisol activity, glycyrrhizin helps to increase energy ease stress and reduce chronic fatigue. It has anti inflammatory action similar to hydrocortisone (glycyrrhizin and glycyrrhetinic acid responsible for it- MAO inhibition). Liquiritigenin and isoliquiritigenin are spasmolytic agent (spasm reliever)[21]. *Amlavetasa* has *Deepana* property due to its *Amla*, *Ushna Virya* and due to its *Tikshna* nature it helps to cure *Kapha* and *Vata* predominance disorders and corrects *Rasavaha Strotas* which avoids further formation of *Ama*[22]. *Laghu Panchmoola* have Combined actions of all herbs in its is *Vataghna*[23]. *Kutaja* is best for *Aampachana* [24] *Shatpushpa* is best *Vedanasthapana* in nature[25]. *Madanphala Twaka* cures pain by decreasing localized swelling[26]. *Rasna* is *Vedanashamak*, *Vatanulomana*, *Vatakaphashamak*

in nature[27]. It tones up to the tissues useful in various inflammatory disorders. *Ashwagnadha Mool* is *Madhura*, *Tikta*, *Kashaya* and *Ushna-Vatakaphashamak*[28]. *Punarnava* is *Tikta*, *Kashaya Anurasa* and *Katu Vipaki*. It is *Vatakaphashamaka* in nature due to its *Ushna Veerya*. It acts as a best *Shothahar* and *Kledahara* drug[29]. *Pippali* is *Deepaniya* and *Vatakaphahara* [30]. *Musta* causes *Aampachana* and *Dipana*[31] due to its *Tikta* and *Katu Rasa*.

Gomutra is *Katu*, *Ushna* and *Vatakaphaghna* in nature which contains copper and gold salts which are elixirs. It acts as a best *Rasayana* and give nourishment to *Manasa*, *Asthi*, *Majjavaha Strotasa*. It acts as a good bio enhancer. It is an activity enhancer and availability facilitator for bioactive molecules including anti infective. It stimulates cells regeneration, so useful in inflammatory condition, cancer. *Guduchi* having active principles which are found to possess anti-complementary and immunomodulatory activities Syringin (Tc-4) and cordial(Tc-7) augments macrophage chemotaxis, phagocytosis. These compounds give rise to significant increase in IgG antibodies in serum humeral and cell mediated immunity is enhanced. So it is useful in inflammation, complement disorders tumor cells other immune based diseases[32]. Cordial in *Tinospora cardifolia* is better to enhancement of nourishment of periosteum which inhibits further degenerative changes in spines.

Application of *Kativasti* was done to give lubrication and strengthening to the affected part at lumbar region due protrusion *Kativasti* with *Dashmool* oil was advised. *Dashmool* oil is excellent for *Vatashmak* in nature[33]. *Kativasti* helps to lubricate local musculature as well as tissues of nearby region to lumbar area and pacifies *Vata* due to its local *Snehana* properties. It is excellent for pacification of *Vata* since *Kati* (lumbar region) is the prime site of *Vata*[34]. In addition to these local therapies, the patient was also recommended for oral Ayurvedic drug regimen as described follows for 1 month.

Shamana Chikitsa : Cap Palsineuron which is having property as *Vatakaphahar* and helpful in regression of inflammation and avoid further necrosis and reduce ischemia is indirectly helpful for releasing compression and rejuvenation of

nerve. *Sunthi Sidhha Errand* oil 15-20 ml was advised to be taken daily at evening with lukewarm water in order to relieve constipation i.e. for *Mrudu* and *Snigdha Virechana* and to break local pathophysiology.

Maharasnadi Quath acts as excellent *Vatashamka*. [35]. After 1 months of Ayurvedic therapy administered, the patient was found to have a substantial recovery of various free movements of lower extremities including lumbar flexion in lumbar region. After completion of one *Kalvasti* regime, stiffness in lumbar region was grossly decreases and range of motion in lumbar spine increases which is detected by measurement in Schober's test. There was also improvement in duration of walking capacity of patient. Along with this radiating pain also subsided. Sleeplessness of patient which was due to intensive pain was relieved after 8-9 days. Patient was feeling comfortable while performing his day to day activities due to loss of restricted movements of body. Decrease in Oswestry low back pain disability index

suggesting that patient's functional disability was getting reduced significantly.

As the treatment was able to make improvements in existing conditions, this approach should be taken into consideration while making any further trial to treat similar or new conditions with the help of Ayurveda.

Conclusion:

This case offers two important bearings to current medical practice pertaining to IVPD. First it offers a novel approach of managing the neurological pain of patients suffering with IVPD once it attaining chronicity. Either alone or in conjunction with conventional rehabilitative measures, this approach upon its further substantiation, holds a promise of adding benefits into the currently utilized protocol of IVPD management. Second and equally important bearing of this case report is to express the utility of Ayurveda as a composite intervention for the purpose of clinical practice and research.

Table no. 6: Shodhana Chikitsa

	Type of procedure	Duration of procedure
Panchakarma Procedures	<i>Sarvanga snehana</i> with <i>Dashmoola oil</i> <i>Patrapinda sweda</i> <i>Kativasti</i> with <i>Dashmoola oil</i> <i>Vasti -Erandmooladi Niruha vasti</i> [8] with <i>Sahachara Anuvasana Vyatasat karma</i> [9]	15days

Table no. 7: Shamana Chikitsa

	Drug	Dose	Time of administration	Anupana	Duration
1	<i>Shunthi</i> <i>Quath+Erand Oil</i>	40 ml+ 15ml	at bed time only	Lukewarm water	1 month
2	Cap Palsineuron	1 cap BID	After each meal	Lukewarm water	1 month
3	Maharasnadi Qwath	15 ml BID	1 hour before each meal	Lukewarm water	1 month

Table no. 8: Assessment of patient (Clinical and neurological findings in a case of IVPD were assessed before and after the Ayurvedic therapy)

Type of assessment Subjective-			Before treatment	After treatment	
				After 15 days	After 1 month
Radiating pain from lumbar, gluteal and low back region to left leg			4+	2+	0
Difficulty and pain while walking and sitting(restricted movement of back)			4+	1+	0
Stiffness in lumbar region(specifically from back to thigh)			4+	1+	0
Heaviness in both leg			4+	0	0
Insomnia			4+	1+	0
Objective- SLR T					
Right leg	+ ve at 20 degree	+ ve at 60 degree	Negative		
Left leg	+ ve at 20 degree	+ ve at 70 degree	Negative		
Gait	Foot drop gait	No Foot drop gait	No Foot drop gait		
Schober's test	3 cm (+ve)	4.5 cm (+ve)	6 cm (- ve)		
Oswestry low back pain disability questionnaire	Score 25 (50%) -Severe disability	Score 16 (32%) -moderate disability	Score 8 (16%) -minimal disability		

Table no. 9: Drugs for Erandmooladi Vasti

Drug Quath drugs	Latin Name	Total quantity of Quath =2500 ml
<i>Erandamoola</i> <i>Palasha</i>	<i>Ricinus communis</i> <i>Butea monosperma</i>	3 pala
<i>Brihat</i> <i>Shaliparni</i> <i>Prishniparni</i> <i>Gokshura</i> <i>Kantkari</i>	<i>Solanum indicum</i> <i>Desmodium gangeticum</i> <i>Uraria picta</i> <i>Tribulus terrestris</i> <i>Solanum xanthocarpum</i>	1 pala
<i>Rasna</i> <i>Ashwagandha</i> <i>Atibala</i> <i>Guduchi</i> <i>Punarnava</i> <i>Aargvadha</i> <i>Devdaru</i> <i>Yastimadhi</i>	<i>Alpinia galangal</i> <i>Withannia somnifera</i> <i>Abutilon indicum</i> <i>Tinospora cordifolia</i> <i>Boerrhoea diffusa</i> <i>Cassia fistula</i> <i>Cedrous deodaru</i> <i>Glycerriza glabra</i>	1 pala
Kalka dyava		
<i>Musta</i> <i>Shatapushpa</i> <i>Hapusha</i> <i>Pippali</i> <i>Vacha</i> <i>Indrayava</i>	<i>Cyperous rotundous</i> <i>Anethum sowa</i> <i>Juniperous communis</i> <i>Piper longum</i> <i>Acorus calamaus</i> <i>Holarrena antidystrica</i>	1 karsha
<i>Madhu</i>	Honey	10 gm
<i>Saindhava</i>	Rock salt	5 gm
<i>Til taila</i>	Sesame oil	100ml
<i>Gomutra</i>	Cow urine	100 ml

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