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Case Study

EFFECT OF *SHAMPAKADI NIRUHA BASTI* ALONG WITH *PATRA PINDA SWEDAN* IN THE MANAGEMENT OF *GRIDHARSI* W.S.R TO SCIATICA

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ABSTRACT

Gridhrasi is a common musculoskeletal disorder with radiating pain, stiffness, numbness and tingling sensation in one or both legs. Due to similar clinical presentation, *Gridhrasi* can be equated with Sciatica, in which there is pain in one or both legs caused by compression of the sciatic nerve or its component nerve roots (L5-S1). It generally affects the people in the productive years of their life and makes walking and standing painful, embarrassing and also limits their mobility. Conservative treatment options for Sciatica only provide momentary relief from pain with a very high recurrence rate. In the present report we discuss the case of a 70 years old female patient who presented with the complaint of severe low backache and pain radiation towards both legs up to the feet with associated numbness in the right leg. She was treated with *Shampakadi Niruha Basti* along with *Patra Pinda Swedan* for the time period of 16 days. There was significant improvement in the signs and symptoms of *Gridhrasi* i.e., SLR Test, pain, numbness, etc. Not only did the combination of these two treatment modalities alleviate the patient's symptoms but it also checked the recurrence of pain by relaxing and strengthening the musculature of the back.

INTRODUCTION

Gridhrasi is a common musculo-skeletal disorder affecting the lower back and legs, it can range from mild to severe debilitating pain which can restrict the patient's daily activities. *Gridhrasi* is a *Shoolapradhana Vataj Vyadhi* which is described in Ayurvedic texts as presence of *Ruka* (pain), *Stambha* (stiffness), *Toda* (pricking pain), *Spandan* (fasciculations) radiating from *Kati* (lumbo-sacral region) to the *Pada* (feet). It has been classified into two main types - *Vataj* and *Vata-Kaphaj*[1]. In Ayurvedic texts the causative factors for *Gridhrasi* and similar *Vataj* disorders have been expounded as excessive travel by fast moving vehicles, accidental injuries to the axial skeleton, lifting heavy weights, excessive physical exertion and prolonged sitting in one posture[2]. In this era of modernization, these causative factors have become very common, which has lead to an increase in the prevalence of *Gridhrasi.*

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In modern context, *Gridhrasi* can be compared with Sciatica. The term sciatica is used to describe radicular pain which originates due to the compression of sciatic nerve or its component nerve roots, resulting in pain, numbness and tingling sensation in the affected leg[3]. According to a survey, the lifetime incidence of sciatica varies from 30-40% and has an annual incidence of 5% in the world[4]. This disease affects mostly the young and geriatric population disabling them in their routine work, restricting their social and personal life. The periodic remission and exacerbation is a significant characteristic of this ailment. Because of this nature of the pain, surgical procedures such as laminectomy, fenestration surgery, and microscopic lumbar discectomy are indicated when conservative treatments fail to achieve satisfactory results, but due to fear of complications and high cost of surgical treatment, patients avoid surgeries, instead they continue to take analgesics for prompt pain relief, which have adverse effects on the gastro-intestinal system.

Gridhrasi being a *Vata* dominant *Vyadhi* the line of treatment includes *Basti Karma*, *Snehan* and *Swedan*[5]. Hence, in the present case the patient was treated with *Shampakadi Niruha Basti* along with *Patra*

Pinda Swedan. The treatment protocol resulted in marked improvement in the clinical signs and symptoms of *Gridhrasi.*

Case Report

History: A 70 years old female patient presented with the complaint of severe low backache with pain radiation towards both legs up to feet with associated numbness in right leg since 10 days.

History of present illness: The patient had a history of low back trauma due to a fall 4 years back. At that time she developed low back pain for which she took NSAIDs and local analgesic cream, which slowly relieved her pain and the patient was able to resume her normal day to day activities after about 2 months. Now 10 days back during her household activity, when she bent down to pick something from the floor, she experienced a sharp pain shooting from her lower back towards both of her legs. Pain was severe in nature with aggravation on walking and standing. At the time of consultation the patient was not able to walk for about 100 meters and could not stand for more than 10 minutes continuously. Pain was also associated with numbness in the right leg. Firstly she went to an allopathic practitioner who gave her NSAIDs with local analgesic cream, which did not relieve her complaints, then she came to the *Panchkarma* outpatient department of Dayanand Ayurvedic Hospital for treatment.

Patient had a history of diabetes and hypertension since 5 years, and taking anti hypertensive and oral hypoglycaemic agents regularly.

Clinical Findings

On general examination, the patient was fit and well oriented. All the vitals of the patient were within normal range. Pallor, oedema, and icterus were absent.

On inspection, gait was antalgic and short stepped, mild scoliosis was present.

On palpation, no tenderness was present on lumbo-sacral region, lumbar flexion and extension were restricted with pain over the full range of motion, SLR Test was positive at 60° on right leg and negative on the left leg, Flip Test was also positive for right leg and negative for left leg, heel walking did not reproduce any low back pain, while toe walking caused mild discomfort at the lower back region of the patient.

Examination of lower limbs

Muscle mass was symmetric in the lower extremities with no wasting, Overall tone of lower limbs was normal, power of the both lower limbs was 5/5, deep tendon reflexes were 2+/4 in right quadriceps, 4/4 in left quadriceps muscle, 2+/4 in the right gastrocnemius and 4/4 in the left gastrocnemius, sensation for pain, touch, temperature were normal, position sense was normal.

All the routine blood investigations were within normal range.

X-ray Findings- Mild Lumbar-levoscoliosis, Intervertebral disc space reduction at D12-L1, L1-L2, L4-L5, L5-S1, straightening of lumbo-sacral curvature with osteophytes at multiple levels.

Diagnosis

On the basis of above findings the case was diagnosed as *Gridhrasi* (sciatica).

Therapeutic Intervention

The treatment was carried out with following *Panchkarma* procedures for 16 days as follows

1. *Basti (Kala Basti)* Schedule - *Shampakadi Niruha Basti* of 480ml and *Murchhita Tila Taila Anuvasan Basti* of 120ml for 16 days.
2. *Patra Pinda Swedan* for 16 days

Table 1: Contents of *Basti*

Contents of *Niruha Basti*		
1.	Honey	80 ml
2.	*Saidhava Lavan*	5 gm
3.	*Sneha (Murchhita tila taila)*	120 ml
4.	*Kalka* *Pippali (Piper longum)* *Musta (Cyperus rotundus)* *Hapusha (Juniperus comminus)* *Shatpusha (Anthum sowa)* *Idrajava (Holarrhena antidysentrica)* *Priyangu (Callicarpa macrophylla)* *Yashtimadhu (Glycyrrhiza glabra)* *Rasanjna (Extractum Berberis)*	40 gm

5.	*Kwath* *Shampak (Cassia fistula)* *Eranda (Ricinus communis)* *Punarnava (Boerhavia diffusa)* *Ashwgandha (Withania somnifera)* *Shati (Curcuma zedoria)* *Shalparni (Desmodium gangeticum)* *Prishnparni (Uraria picta)* *Brihati (Solanum indicum)* *Kantkari (Solanum xanthocarpum)* *Gokshur (Tribulus Terrestris)* *Bala (Sida cordifolia)* *Rasna (Pluchea lanceolata)* *Guduchi (Tinospora cordifolia)* *Devdaru (Cedrus deodara)* *Madhanphala (Randia spinosa)*	240 ml
Contents of *Anuvasan Basti*		
1.	*Murchhita tila taila* (*Seasame oil*)	120 ml
2.	*Shatpushpa churan* (*Anthum sowa*)	3 gm
3.	*Saidhav lavan*	1 gm

Kala Basti schedule consisting of 16 number of *Basti* in which first *Basti* was *Anuvasan Basti* (oil enema) followed by *6 Niruha Basti* (decoction enema) and 6 *Anuvasan Basti* alternatively and lastly 4 *Anuvasana Basti* were administered.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Basti	A	N	A	N	A	N	A	N	A	N	A	N	A	A	A	A

A-Anuvasan (oil enema) *N-Niruha* (decoction enema)

Assessment Criteria

Table 2: Criteria of Assessment for Observation

S.no.	Parameters	Grading	Score
1.	SLR	Range of movement > 90 degree 90 - 71 degree 70 - 51 degree 70 - 51 degree Upto 30 degree	 0 1 2 3 4
2.	Oswestry Disability index	Minimal Disability (0-20%) Moderate Disability (21-40%) Severe Disability (41-60%) Crippled (61-80%) Bed bound or exaggerated (81-100%)	0 1 2 3 4
3.	*Ruka* (Pain)	No pain Mild pain Moderate pain Severe pain	0 1 2 3

4.	*Toda* (Pricking sensation)	No pricking sensation Mild pricking sensation Moderate pricking sensation Severe pricking sensation	0 1 2 3
5.	*Deha Vakrata* (Abnormal body posture)	No abnormality in posture Mild abnormality in posture Moderate abnormality in posture Severe abnormality in posture	0 1 2 3
6.	*Suptata* (Numbness)	No numbness Mild numbness lasts for 2-3hrs Moderate numbness for 3-6hrs Severe numbness> 6hours	0 1 2 3
7.	*Stambha* (Stiffness)	No stiffness Mild stiffness for 10-30 mins Moderate stiffness for 30-60min Severe stiffness for >1 hr	0 1 2 3

Assessment Frequency

The patient was assessed on day 0 (at the time of enrolment of the patient), day 8 (mid way through the course of treatment), day 16 (at the end of treatment), day 30 (1st follow up after 2 weeks), day 60 (2nd follow up after 6 weeks).

Therapeutic Assessment

Table 3: Scores Achieved Per Assessment

Assessment criteria	Day 0	Day 8	Day 16	Day 30	Day 60
Straight Leg Raise Test	2	2	0	0	0
Oswestry Disability Index	2	1	0	0	0
Ruka (Pain)	3	1	1	0	0
Toda (Pricking pain)	0	0	0	0	0
Deha vakrata (Abnormal body posture)	2	1	0	0	0
Stambha (Stiffness)	0	0	0	0	0
Suptata (Numbness)	2	1	1	0	0
Total score	11	6	2	0	0

Fig. 1 - Preparation of *Niruha Basti*

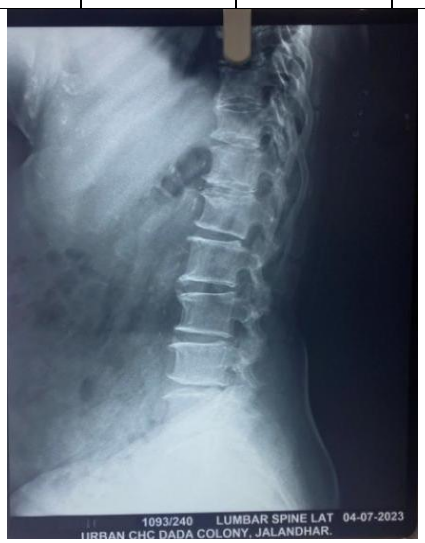

Fig. 2 - X-Ray Lateral view (L.S. Spine)

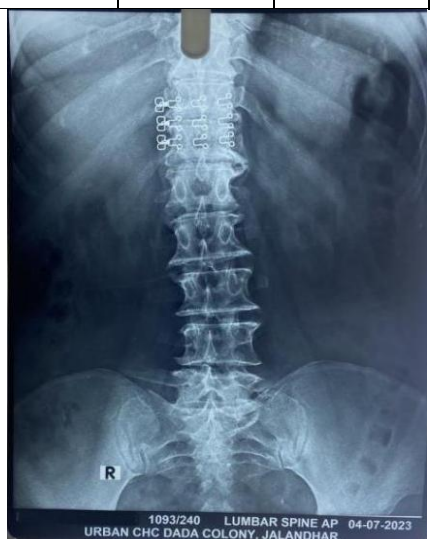

Fig. 3 - X-Ray AP view (L.S. Spine)

RESULTS

The patient had complete relief from all the symptoms as is evident from the above data. The patient is living symptom free since 3 months with no sign of recurrence of the ailment. The patient was not administered any oral medication during the course of the treatment.

DISCUSSION

Gridhrasi is a *Shoolapradhana Vata Vyadhi,* with symptoms of *Ruka* (pain), *Toda* (pricking pain) and *Stambha* (stiffness) initially in *Kati* (lumbo-sacral region) with its radiation to the distal parts i.e., *Pristha* (back)*, Janu* (knee)*, Jangha* (calf) upto the *Pada* (foot) [1]*.* Another important sign of *Gridhrasi* as per *Sushruta Samhita* is that vitiated *Vata* in *Kandara* (tendons) produces pain at the time of rising the leg keeping it straight and restricts the movement of thigh[6], this sign is quite similar to an important clinical test used for the diagnosis of sciatica known as Straight Leg Raise test. For the management of *Gridhrasi, Bast i*(medicated enema) is the treatment of choice because *Gridhrasi* is a *Pakwashaya* and *Katyashrita Vyadhi* (disease originating from large intestine and hip region), so *Guda marga* (anal route) was selected as the most appropriate route of administration and *Shampakadi Basti* was selected in *Kala* regimen. *Shampakadi Basti* has been mentioned in *Sushruta Samhita* and is indicated for *Prishtha Shool* (backache), *Uru Shool* (thigh pain), *Trika Shool* (sacral pain)*, Marutaghan* and *Rakta-Mansa-Bala Pradam*[7]*.* Whereas for *Anuvasan Basti Murchhita tila taila* was selected because of its *Vatashamak* (*Vata* pacifying) properties[8]. Moreover as for the treatment of *Vata vyadhis* external *Sthanik Abhyang* (oleation) and *Swedan* (sudation) on the affected part is equally important therefore *Patra Pinda Swedan* with *Erand* and *Arka patra* was chosen, as it helps in stimulating and strengthening neuro-muscular and articular system of the body, resulting in reduction of pain and inflammation in the affected part.

Discussion on Probable Mode of Action of *Basti*

Gridhrasi, is a *Vatavyadhi* and *Basti Chikitsa* is considered as *Ardha Chikitsa* or even *Poorna Chikitsa* for *Vata Vyadhis*[9]. The main objective of administering *Niruha Basti* is to achieve *Apanavayu Anuloman*, *Agni-Deepan* and *Shoolprashman*[10]. In formation of *Niruha Basti* a solution is prepared by mixing honey, salt, medicated oil, herbal drug powders and decoctions. This solution is then administered through the anus.

Absorption of drugs from intestinal epithelium involves two routes: the trans-cellular route and para-cellular route. Trans-cellular route depends on lipophilicity of medication, while in para-cellular route, drug diffuses through space between epithelial cells thus the short chain fatty acids (SCFA) and long chain fatty acids (LCFA) of medicated oils infused with herbal drugs, gets absorbed into systemic circulation through intestinal mucosal. In many studies short chain fatty acids were found the most effective as absorption-promoting adjuvants for rectal drug delivery[11].

Rectal administration of medications can also bypass hepatic first pass metabolism. Inferior rectal veins drain the lower part of the rectum and enter into the inferior vena cava and bypass the liver before entering the general circulation. This indicates that the drug administered in *Basti* can bypass the liver resulting in the avoidance of hepatic first pass metabolism and increases systemic circulation[11].

So, after doing *Niruha Basti*, the drugs that might have been absorbed and enter the systemic circulation thus could probably impart their effect on the lumbar area there by accelerating the healing process. This is a probable hypothetical understanding about mode of action of *Niruha Basti* in sciatica and it needs further research to prove its validity.

Probable mode of action of *Patra Pinda swedana*

Patra Pinda Swedana is a type of *Sa-agni Swedana* where in the heated bolus bags containing leaves of medicinal plants are applied on the affected in a specific manner. These heated bolus bags when rubbed against the skin rise the skin temperature, which enhance the trans-dermal delivery of drugs by increasing blood circulation, permeability of blood vessel wall, drug solubility. Heat having direct effect on muscle tissue increase the temperature and results in reduction of pain and inflammation along with muscle relaxation in *Gridhrasi*.

CONCLUSION

This report highlights the combined effectiveness of *Basti Karma* and *Patra Pinda Swedan* in the management of *Gridhrasi*. *Basti* therapy gives an immediate and persistent analgesic effect while *Patra Pinda Swedan* strengthens the musculature of lumbo-sacral region, thereby checking any chance of recurrence of the complaints. These two therapies are not only easy to administer but also minimize the requirement for oral medications, hence proving economical for the patient.

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