

CASE STUDY

Ayurvedic Management of *Gridhrasi* W.S.R. Lumbago Sciatica Syndrome with “*Pippali Churna Vati*”

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ABSTRACT

Gridhrasi (Sciatica) one of the important disorders affecting the locomotors system is increasing day by day in present scenario. It (sciatica) is one among the *Vataja Nanatmaja Vyadhi* (disease) described in *Ayurveda* which is the most common disorders caused by Vata and is very difficult to manage in clinical practice. *Gridhrasi* is said to cause an abnormal throwing action in the affected leg. By this abnormality and due to the persisting severe pain, the patient has a typical gait (slightly titled toward the affected side and affected leg in slightly flexed position whereas other leg is extended) resembles with the gait of vulture, and hence, the name *Gridhrasi* is given to this unique illness. A case of a 45-year-old man experiencing pain in lower back region radiating to right leg since 8 months. Patient also had complaints of stiffness, tingling sensation, and numbness in his right lower limb since 6 months. Hence, he administered trial drug “*Pippali Churna vati*” (*Pippali churna*, *Eranda Taila*, and *Gomutra*), 2 g twice in a day (Morning and Evening) followed by luke warm water for 3 months. (Follow-up in each 30 days). The symptoms of *Gridhrasi* (Sciatica) like *Ruka* (Pain), *Toda* (Pricking Sensation), *Stambha* (Stiffness), and *Spandan* (Twitching), *Kaphaja* symptoms like *Aruchi* (Anorexia), *Tandra* (Drowsiness), and *Gaurava* (Heaviness), and tests such as S.L.R. test and walking test were observed over the treatment. Analysis of result showed improvement in *Gridhrasi* (Sciatica). Study concluded that given treatment is found effective in management of *Gridhrasi*.

1. INTRODUCTION

Gridhrasi is a pain predominant condition in which patient finds difficulty in carrying out daily activities such as walking and sitting. *Gridhrasi* term might have been given to this disease. In Ayurveda, *Gridhrasi* is described under 80 types of *vataja nanatmajavyadhi*.^[1] It indicates typical gait that resembles with a “*Griddha*.” *Gridhra* means vulture. Vulture is fond of meat and has a particular fashion of eating meat. It pierces its beak deeply in the flesh and then draws it forcefully, causing severe pain. In this disease, the patient walks like the bird “*Griddha*” and his legs becomes tense and slightly curved, so due to resemblance with the gait of a vulture.^[2] The symptoms are *Stambha* (Stiffness), *Toda* (Pricking sensation), *Ruk* (pain), and *Muhuspandan* (Tingling). In *Vata-Kaphaja* type of *Gridhrasi*, the symptoms are – *Tandra*, *Gaurava* (heaviness), and *Arochaka*. The pain starts from the *Sphik* region (gluteal region) and radiating through posterior aspect of

Kati, *Prishtha* (low back), *Janu* (knee), and *Jangha* (thigh) till *Pada* (feet).^[3] Acharya Sushruta views when two kandara in the leg gets affected with vata dosha, it limits the extension of leg, resulting in *Gridhrasi*.^[4,5] Vagbhata while describing the *Gridhrasi* Lakshana used the word *Utk-shepana* in place of *Kshepa* means that patient finds difficulty or fails to uplift the leg due to vata.^[6,7] *Gridhrasi* disease closely resembles with *Sciatica* of modern medicine initi signs and Symptoms. Lumbar spinal root pain may radiate through the buttock and leg to the knee and below, with paresthesia in the foot with a large disk prolapsed is called “*Sciatic*.”^[7] *Sciatica* is basically a symptom that arises due to compression or inflammation of sciatic nerve.^[8] About 90% of the time *sciatica* is due to a spinal disc herniation pressing on one of the lumbar or sacral nerve roots.^[9,10] About 50% of working adults experience a back injury each year.^[11] The annual prevalence of disk-related sciatica in the general population is estimated at 2.2%.^[12] *Sciatica* is most common in the third to sixth decades of life and occurs about 1–3 times more frequently in men than in women.^[12] For this rising problem, there is no concrete conservative management available as of the present scenario. Therefore, to find out solutions through use of proper, Ayurvedic treatment as an alternative approach

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for *Gridhrasi* has been taken as are search problem in this particular field. Hence, this study aims to describe the plan of management of *Gridhrasi* with Ayurvedic Medicine “*Pippali Churna vati*” (*Pippali Churna*, *Eranda tail*, and *Gomutra*).

2. MATERIAL AND METHODS

2.1. Case Presentation

A 45-year-old male was admitted to the IPD Male Ward, Department of Kayachikitsa, Gopabandhu Ayurveda Mahavidyalaya, Puri. He complained of lower back pain radiating to the right leg for the past 8 months. The patient also reported stiffness, tingling sensation, and numbness in his right lower limb for the past 4 months. He had previously undergone allopathic treatment at the Government Hospital, Puri, but experienced no relief. Upon examination, his Straight Leg Raise (S.L.R.) test was found to be limited to 30°. Subsequently, he sought treatment at the Department of Kayachikitsa, Gopabandhu Ayurveda Mahavidyalaya, Puri.

The condition of the patient before treatment is depicted in Figures 2-4.

2.2. History of Present Illness

The patient was quite well 6 months back. Suddenly, then he complained pain in lower back region radiating to right lower limb. These symptoms were associated with reduced appetite from 3 months, gaseous distension of abdomen from 2 months, and constipation and general weakness from 1 month. The patient was diagnosed for *Gridhrasi* on the basis of subjective and objective parameters and was admitted in Kayachikitsa Department, Gopabandhu Ayurved Mahavidyalaya and Hospital, Puri for Ayurvedic treatment.

2.3. Past History of the Patient

The patient was not suffering such type of disease in past. He was a non-smoker or drunker and worked in an environment with no known exposure to fumes, dust, chemicals, and other occupational allergens. He was having no known history of allergy to any drug. There was no significant family history found for such type of disease.

2.4. General Examination

The vitals showed

Asthavidha Pariksha--

- BP: 130/80 mmHg
- PR: 76/min
- RR: 18/min
- Temperature: 98.6°F
- Wt: 70 kg
- BMI: 27.5kg/m²
- Nadi (pulse): Vata-Kaphaja
- Mala (bowels): Asamyak (Constipated)
- Mutra (urine): Samyak
- Jihwa (tongue): Sama (coated)
- Shabdha (speech): Prakruta
- Sparsha (skin): Anushnasita
- Druk (eyes): Prakruta
- Akruiti (posture): Madhyama

On systemic examination, no abnormality was detected in the nervous, cardiovascular, respiratory, and gastrointestinal system.

2.5. Criteria for Assessment

Both subjective and objective criteria were taken for assessment of the treatment. Clinical assessment of symptoms and severity was done in terms of gradation of symptoms. For this purpose, main sign and symptoms were given suitable score. All these criteria were recorded according to the rating scale in the patient before and after the treatment.

2.5.1. Subjective parameters

This includes the symptoms and severity in suitable grading score for *Vataja* Symptoms such as *Ruka* (Pain), *Toda* (Pricking Sensation), *Stambha* (Stiffness), *Spandan* (Twitching), and *Kaphaja* and Symptoms such as *Aruchi* (Anorexia), *Tandra* (Drowsiness), and *Gaurava* (Heaviness) mentioned in Tables 1 and 2.

2.5.2. Objective parameter

(A) S.L.R. (*Straight Leg Raise*) Test.

(B) *Walking distance* mentioned in Table 3.

2.6. Parameters of Assessment

The progress of therapeutic regimen was assessed on subjective and objective parameters. Improvement in clinical symptoms was taken for subjective assessment and S.L.R. test and walking distance test were the objective parameters.

2.7. Assessment of Total Effect of Therapy

The overall assessment was calculated on the basis of average improvement in terms of percentage relief of scores.

1. Complete remission – 100%
2. Marked improvement – 76%–100%
3. Improvement – 51%–75%
4. Mild improvement – 25%–50%
5. Unchanged – 25%

2.8. Study Design

On the basis of symptoms, research trial drug “*Pippali Churna Vati*” (*Pippali Churna*, *Eranda taila*, and *Gomutra*.) was advised to the patient for 3 months. (Follow-up in each 30 days).

Dose—2 g twice in a day (Morning and Evening) followed by Luke warm water.

3. RESULTS

The assessment of the patient was done on the basis of subjective and objective parameters. During the course of treatment, the patient did not develop any additional complaints. After the treatment, marked improvement was observed in both symptoms and objective test findings.

The patient’s condition at the time treatment is shown in Figure 3.

The patient’s condition after completion of treatment is depicted in Figure 4.

- Subjective improvement in symptoms is shown in Table 4.
- Objective improvement in the S.L.R. test and walking distance is shown in Table 5.

4. DISCUSSION

Gridhrasi is a pain predominating ailment and is well described in ancient treatises with a definite approach to etiological as well as

the therapeutic effects. It is included among the eighty “*Nanatmaja Vata Vyadhies*” which is commonly seen in the society affecting the functional ability of lower back & lower limbs. Arunadutta in his commentary defined clearly that the pain is produced at the time of raising leg straight and it restricts the movement of thigh.

Pippali choorna (powdered *Piper longum*) due to its *Ushna* (hot), *Tikshna guna* (penetrating) leads to *Shoolanashan* (pain relief), and *Vyadhi prashaman* (disease cure) in *Gridhrasivadyahi*.^[13] Pharmacology of *Pippali* is antibacterial, anti-inflammatory, antimalarial, hepatoprotective, anticancer, antioxidant, CNS stimulant, antitubercular, antihelminthic, hypoglycemic, antispasmodic, cough suppressor, anti-giardial, antiulcerogenic, analeptic, immunomodulatory, bioavailability-enhancing, larvicidal, radioprotective, melanin-inhibiting, cardioprotective, antidepressant, antifungal, and antiamebic.^[14]

Eranda Taila alleviates *Vata dosha* in sciatica due to its *Tikta Rasa* and *Madhura Vipaka*. Its *Tikta* and *Katu Rasa*, along with *Ushna Virya*, help in pacifying *Ama dosha*. Also due to its *Sukshma Guna*, it can enter into minute pores, and *Sroto vishodhana* property enables it to cleanse the channels. It enhances *Medha Kanti Bala Arogya Smriti* (improve cognitive and memory functions and augment general health and *Rasayana* Property).^[15] It is also useful in managing constipation by promoting bowel movements, owing to its laxative effect.

Gomutra, or cow urine, alleviates *Vata*, *Kapha* doshas due to its *Katu* and *Tikshna* properties in the management of *Gridhrasi*. It has also essential nutrients and compounds such as nitrogen, potassium, calcium, copper, and various vitamins and enzymes, which gives nutrition to the sciatica nerve and strengthens to the bone. In *Ayurveda* treatments, *Gomutra* acts as a detoxifying agent, supporting digestion, and restoring metabolic balance. Recent researches show that also cow urine having various pharmacological potentials which include anti-oxidant, lipid lowering, anti-diabetic, anti-carcinogenic, anti-helminthic, etc., effects, also good digestive, laxative, and neutralizing agent against toxin and *Tridosha Dushtinashan* and decreases *Vata* disorder. Additionally, it functions as a bio-enhancer and exhibits antimicrobial properties, acting similarly to an antibiotic. Cow urine contains all substances, which are naturally present in the human body. Thus, consumption of cow urine maintains the balance of these substances and this helps manage incurable diseases such as cancer, autoimmune disorders, immunomodulatory,^[18] AIDS, and benefits in case of antibiotic resistance infectious diseases.

4.1. Probable Mode of Action of “*PippaliChurnaVati*” in *Gridhrasi*

Vata and *Kapha* are the main causative factors for *Gridhrasi*, and they can be pacified by the *Katu Rasa*, *Ushna Virya*,^[19] and *Tikshna Guna* present in this compound. Mainly due to the *Katu Rasa* and *Ushna Virya* in *Pippali*, it exhibits anti-inflammatory and analgesic actions on the sciatic nerve. *Eranda Taila* also pacifies *Vata* and *Kapha* doshas due to its *Katu Rasa* and *Tikshna Guna* while clearing all channels in the body through its laxative properties. *Gomutra*, possessing *Katu Rasa*, *Ushna Virya*, and *Tikshna Guna*, pacifies the *Vata* and *Kapha* doshas in *Gridhrasi*. Furthermore, it acts as a potent antibiotic, exhibiting anti-inflammatory and analgesic effects on the sciatic nerve.

From the above analysis, it is clear that the trial drug shows a favorable response in all the mentioned subjective and objective criteria. Hence, the drug is considered safe, low-cost, and effective for managing *Gridhrasi*. In conclusion, *Gridhrasi* can be successfully managed through appropriate Ayurvedic assessment and treatment without any side effects.

The image of *Pippali Churna Vati* is shown in Figure 1.

5. CONCLUSION

Gridhrasi is a major cause of morbidity makes a person unable to perform day to day activity.

This case study demonstrated the superior management of *Gridhrasi* by *Shaman Chikitsa*. The patient's ability to convey the characteristics has increased, and there have been considerable changes in the patient's quality of life, according to subjective and objective criteria. As of right now, the patient is doing well with his regular routines. The combination of *Pippali Choorna*, *Eranda Taila*, and *Gomutra* shows a comprehensive and integrative approach in the treatment of *Gridhrasi*. As modern medicine emphasize on symptomatic relief, but in *Ayurveda* science emphasize treating the root cause as well as the symptoms. Hence, these traditional remedies present an opportunity for safe, effective, and accessible treatment alternatives, underscoring the need for further scientific evaluation of such therapies within the healthcare landscape. In above discussion and result, we can say that this drug is found to be very effective and cheap in *Gridhrasi* disease and same shall be done on large population with more objective criteria. This case study not only gives us confidence and better understanding for treating such cases in Ayurvedic hospital but also leads in the direction of further clinical trials to establish cost effective and safe Ayurvedic therapy. During the course of treatment, the patient physically and mentally feels in good health. Finally, patient is satisfied with Ayurvedic medicine. In last, we can conclude that *Gridhrasi* can be successfully managed by proper Ayurvedic assessment and treatment without any side effect.

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7. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in design and execution of the article.

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9. ETHICAL APPROVALS

This study not requires ethical clearance as it is a case study.

10. CONFLICTS OF INTEREST

Nil.

11. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

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Figure 1: Pippali Churna Vati



Figure 2: Before treatment



Figure 3: At the time of treatment



Figure 4: After treatment

Table 1: Grading of *Vataja* Symptoms

Vataja symptoms	Severity/duration	Score
Ruk (Pain)	No pain	0
	Occasional pain	1
	Mild pain-walking difficulty	2
	Moderate pain and slight difficulty in walking	3
	Severe pain with severe difficulty in walking	4
Toda (Pricking sensation)	No pricking sensation	0
	Occasional pricking sensation	1
	Mild pricking sensation	2
	Moderate pricking sensation	3
	Severe pricking sensation	4
Stambha (Stiffness)	No stiffness	0
	Sometimes for 5–10 min	1
	Daily for 10–30 min	2
	Daily for 30–60 min	3
	Daily more than 1 h	4
Spandan (Twitching)	No Twitching	0
	Sometimes for 5–10 min	1
	Daily for 10–30 min	2
	Daily for 30–60 min	3
	Daily more than 1 h	4

Table 2: Grading of *Vata-Kaphaja* symptoms

Vata-Kaphaja symptoms	Severity/duration	Score
<i>Aruchi</i> (Anorexia)	No anorexia	0
	Mild anorexia	1
	Moderate anorexia	2
	Severe anorexia	3
<i>Tandra</i> (Drowsiness)	No drowsiness	0
	Mild drowsiness	1
	Moderate drowsiness	2
	Severe drowsiness	3
<i>Gaurava</i> (Heaviness)	No heaviness	0
	Mild heaviness	1
	Moderate heaviness	2
	Severe heaviness	3

Table 3: Grading of objective variables

Tests	Severity/duration	Score
S.L.R. test (Sakthini-kshepam-Nigraha)	>90	0
	71–90	1
	51–70	2
	31–50	3
	Upto 30	4
Walking distance	Patient can walk up to 1 km without pain	0
	Patient can walk up to 500 m without pain	1
	Patient can walk up to 250 m without pain	2
	Patient feels pain on standing	3
	Patient cannot stand	4

Table 4: Improvement in subjective variables findings

Symptoms	BT	AT
<i>Ruk</i> (Pain)	4	1
<i>Toda</i> (Pricking sensation)	3	0
<i>Stambha</i> (Stiffness)	4	1
<i>Spandan</i> (Twitching)	4	0
<i>Aruchi</i> (Anorexia)	2	1
<i>Gaurava</i> (Heaviness)	2	0
<i>Tandra</i> (Drowsiness)	2	0

Table 5: Improvement in objective variables findings

Test name	BT	AT
S.L.R. test (Sakthi nikshepam Nigraha)	2	0
Walking distance	3	1