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A clinical study on management of *Gridhrasi*

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ABSTRACT

Gridhrasi is a painful condition in which the person can't sit and walk properly that hampers his normal activity. Almost all signs and symptoms of *Gridhrasi* resemble with the condition of sciatica described by the modern texts. Its detail symptomatology has been described in *Ayurvedic* classics since 5000 years, while this condition was known to modern medical science just two centuries ago. According to *Ayurveda* principles treatment for *Vatavyadhi* should be *Shodhana* followed by *Shamana* therapy. According to present era it should be less time consuming and more effective. Keeping this in mind, A clinical study in the management of *Gridhrasi* with *Shodhana* and *Shamana* therapy was undertaken in VYDSAMC & Hospital, Khurja, Bulandshahr, with the aim to give promising results to the patient of *Gridhrasi*. *Shodhana* therapy as *Mridu Virechana* followed by *Shamana* with *Yograjaguggulu* and *Maharasnadi Kwatha* was given to 29 patients with classical symptoms of *Gridhrasi*, it showed significant results. The following study can be taken for further research in this field.

Key words: *Gridhrasi*, *Yograjaguggulu*, *Maharasnadi Kwatha*, Sciatica.

INTRODUCTION

Gridhrasi is an intractable physical complaint, which carry little threat to life but it interferes greatly with living. People suffer from this affliction, can't stand or sit properly and the painful limb continuously draws his attention. Almost all signs and symptoms of *Gridhrasi* resemble with the condition of sciatica described by the modern texts. Its detail symptomatology has been described in *Ayurvedic* classics since 5000 years, while this condition was known to modern medical science just two centuries ago. Although low back pain is a common condition that affects as many as 80-90% of people during their

lifetime, true sciatica occurs in about 5% of cases. Sciatica is more common between 30 and 50 years of age.^[1]

Pain in sciatica is very severe, which makes the patient difficult to walk; hampering the daily routine of the individual. No satisfactory treatment is available in modern medical science, patients depends on pain killers which has a temporary relief.

Ayurveda classics have given a detailed description about the treatment of *Vatavyadhi* but detailed description about treatment of *Gridhrasi* is mentioned by few experts only.

Modern medicine has limited source of treatment such as temporary medication with analgesics, sedatives etc. physiotherapy and lastly surgery. Surgery also is not an ultimate answer and re-occurrence is common. In the absence of curative treatment, this disease is a challenge among research scholars. A description regarding treatment of this disease is available in *Ayurveda* classics. *Gridhrasi* is a *Shoolapradhana Nanatmaja Vata-Vyadhi*, intervening with the functional ability of low back and lower limbs. In this disease, onset of *Ruk* (pain), *Toda* (numbing pain) and *Stambha* (stiffness) is initially in *Kati* (*lumbosacral region*) and radiates distal to *Pristha*, *Janu*, *Jangha* till *Paada*.^[2] If the vitiated

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Doshas are more in amount and no relief is acquired by *Snehana*, *Swedana*, then only *Mridu Virechana* is indicated for the *Doshashodhana*.^[3] So *Panchamoola Kwatha*, *Nishotha* with *Eranda Taila* as indicated in *Chakradatta*^[4] and *Yograja Guggula* with *Maharasnadi Kwatha* as *Shamana* in *Sarangdhar Samhita*^[5] has been claimed effective in this disease.

So a clinical study with *Mridu Virechana* with *Panchamoola Kwatha*, *Nishotha* with *Eranda Taila* as *Shodhana* therapy and *Yograja Guggulu* and *Maharasnadi Kwatha* as *Shamana* treatment for *Gridhrasi* was conducted in VYDSAMC and Hosp. Khurja.

OBJECTIVES OF THE STUDY

The present study has been undertaken with following objectives.

1. To study the etiology of *Gridhrasi* in the light of both Ayurveda and modern perspectives.
2. To evaluate the role of *Yograja Guggulu* and *Maharasnadi Kwatha* along with *Shodhana* therapy in the treatment of *Gridhrasi*.

Plan of Study

29 patients of *Gridhrasi* from the O.P.D. and I.P.D. of *Kayachikitsa* department of VYDSAMC Hospital and medical camps organized by the institute, were selected with the classical symptomatology of *Gridhrasi* for the present study. For this study only uncomplicated patients of *Gridhrasi* were selected.

Criteria for selection of patients

All the selected patients were submitted for detailed clinical history and complete systemic examination on the basis of specially prepared preformat.

Routine hematological, urine and stool examinations were carried out to exclude the possibility of any other disease as well as to know present status of the patients.

Radiological assessment of the lumber spine was carried out in patients where it was necessary to ascertain the diagnosis as well as for differential diagnosis.

Routine biochemical investigations like serum cholesterol, serum creatinine, total protein, albumin,

globulin ratio, blood urea, FBS, were carried out before starting the treatment and after completion of treatment.

Before administration of the therapy a detailed proforma, where in completed history, signs and symptoms, *Dashavidhpariksha*, *Ashtavidhpariksha*, *Nidanapanchaka Pariksha* etc. were compiled together, was filled for each patients. Vitals like blood pressure, pulse, respiratory rate, temperature etc. were also accounted.

Drugs and method of administration

Patients were given *Virechana* with *Panchakola Kwatha* and *Nishotha* with *Eranda Taila*, prior to *Virechana*, *Samyak Snehana* and *Swedana* was done. After *Samasarjana Karma*, *Yograja Guggulu 2 tablet twice a day* with *Maharasnadi Kwatha* 10-15 ml with equal amount of water, was given as *Shamana* treatment for 30 days. *Mridu Abhyanga* and *Sweda* was given daily during the oral course.

Course of Virechana

The patients were administered *Chitrakadi Vati* (250mg) in a dose of two tablets twice a day after meals for 3 days. This had to be prolonged in a few cases, till *Dipana Pachana Karma* was attained to full satisfaction. Next *Abhyantara Snehapana* with *Shuddha Ghrita* was commenced in progressively increasing doses starting with a range of 30ml till *Samyak Snehana Lakshana* were obtained. Approximately 7 days *Ghritapana* was given. The patients were made to drink just after the dawn with *Kosnajala as Anupana*. Patient was advised not to take any food till *Ghrita* digests properly. They were also advised not to have any strain, stress, day time sleep, cold, *Ruksha*, pungent food.

After *Ghritapana* course, *Abhyanga* with *Bala Taila* followed by *Bhaspa Sweda* was given twice daily for 3 days. Then patients were advocated *Virechana Yoga* as *Eranda Taila* 50ml and *Panchakola Kwatha* 50ml with *Nishotha Churna* in empty stomach. Vital parameters were noted before the administration of *Virechana* for the safety of patients and to prevent any adverse effect. *Shuddhi Lakshanas (Laingiki, Vaigiki and Antaki)* were also adjudged. The patient

was made to undergo *Samsarjana Karma* with *Peya, Vilepi, Mudga Yusha* for 3-5 days followed by normal diet according to *Vega*.

After *Samsarjana Karma, Yograja Guggulu* with *Maharasnadi Kwatha* was given for 30 days.

Management of patients

The patients were asked to visit daily and their pulse, respiration and blood pressure and any change in signs and symptoms during the course of treatment were recorded.

Criteria for assessment

The detail assessment of clinical signs and symptoms are described below with the detail of score given to each sign and symptoms and clinical test carried out.

Ruk - Distribution of pain

In Ayurvedic texts the feeling of pain at 6 sites viz. *Kati, Sphik, Uru, Janu, Jangha* and *Pada* have been mentioned. The presence of pain at each site was given score as one and thus total score before treatment was noted. Similarly after the treatment, depending upon the presence of pain in number of sites and again total score was calculated.

Severity of pain on the basis of severity score of each site having the pain was noted and mean was calculated.

- No pain - 0
- Mild pain - 1
- Moderate pain - 2
- Severe pain - 3

Stambha – Stiffness

- No stiffness or stiffness lasting for 5 min - 0
- 5 minute to one hour - 1
- One hour to two hour - 2
- Two hours to four hours - 3
- More than four hours - 4

Toda

- Absent - 0
- Mild, occasionally - 1
- Moderate after movement, Frequent, but not persistent - 2

- Severe, persistent - 3

Sakthikshepana Nigrahan

This sign can be assessed by the straight leg raising test given in modern medicine. The patient lying in supine position was asked to raise his leg while straight and the ability of the patient to raise the leg up to the extent without pain was recorded in terms of approximate degree made in the supine sleeping position. This was measured in degree using Goniometry.

Graha

- Forward bending up to toes - 0
- Forward bending up to mid leg - 1
- Forward bending up to knee - 2
- Forward bending up to mid thigh - 3

Tenderness score

- No tenderness - 0
- Subjective experience of tenderness - 1
- Wincing of face on pressure - 2
- Wincing of face and withdrawal of the affected part on pressure - 3
- Resist - touch - 4

Walking time - For this purpose patient was asked to walk 25 feet distance in a straight way in full speed and time taken was recorded by the help of a stopwatch in seconds. The walking time was noted before and after the treatment.

Stepping time - For this purpose patients were asked to do stepping action (flexion of hip joint up to 90 degree in standing position and knee flexed) alternatively with both legs. The time taken for 50 steps was noted before and after the treatment.

SLR Test - In this test the relaxed and extended lower extremity is gingerly lifted passively from the bed and the patient is instructed to inform the examiner when and where pain occurs by this test and it was recorded in terms of approximate degrees made in the supine sleeping position. This was measured in degrees using Goniometer.

Spasm - It was assessed by asking the patient to perform the specific movements in which that particular muscle is involved. A muscle in spasm will restrict the movement along with the production of pain, degree of spasm was measure as follows.

- Normal movement without pain - 0
- Mild pain with slight restriction of movement - 1
- Moderate degree of pain with considerable restriction of movement - 2
- Absolute restriction of movement - 3

Muscle power - System of grading recommended for the peripheral nerve injuries by committee of medical research council has given the following valuation.

- No contractions present - 0
- Flicker of movement which can be seen and felt- 1
- Muscle contraction with gravity eliminated - 2
- Muscle contraction against gravity - 3
- Muscle contraction against gravity & resistance- 4
- Normal muscle contraction - 5

Associated symptoms

Associated symptoms of the disease such as *Supti, Dehasya Pravakrata, Gaurava, Tandra, Arochaka* were given score as below,

- Symptom present - 2
- Markedly reduced - 1
- Absent - 0

Statistical Analysis

Mean, percentage, S.D., S.E., 't' and 'p' values were calculated. Paired 't' test was used for calculating the 't' value in the paired data.

Criteria for assessing the total effect

Considering the overall improvement shown by the patients in signs, symptoms and clinical parameters,

the total effect of therapy was assessed in terms of cured, markedly improved, improved and unchanged.

Cure: The patients showing the complete relief in the main symptoms like the pain along the sciatic nerve distribution with negative SLR test and ability to raise the leg completely without pain were recorded as cured.

Markedly improved: More than 50% relief in signs and symptoms and SLR tests were recorded as markedly improved.

Improved: Improvement in signs and symptoms between 25% to 50% was taken as improved.

Unchanged: Patients improvement in their signs and symptoms below 25% were recorded as unchanged.

RESULTS

In this study 29 patients were registered irrespective of their age, sex, religion etc. Out of 29 only 25 patients continued for the treatment. The patients were administered with *Virechana* and followed by *Shamana* treatment with *Yograja Guggula* and *Maharasnadi Kwatha*.

Effect of therapies

Table 1: Effect of therapy on cardinal signs and symptoms of 25 patients of Gridhrasi.

Signs & symptoms	Mean score		% relief	Paired 't' test			
	BT	AT		SD(±)	SE(±)	t	p
Distribution of pain	4.8	1.8	64.58	0.99	0.31	9.85	<0.001
Severity of pain	2.8	0.7	75	0.73	0.23	9	<0.001
<i>Stambha</i>	2.7	0.7	74	0.66	0.21	9.48	<0.001
<i>Muhuspandana</i>	2.4	0.6	72.85	0.97	0.32	5.48	<0.001
<i>Dehashyapravakrata</i>	2.1	0.6	71.42	0.97	0.30	4.5	<0.01

Table 2: Effect on associated signs and symptoms of 25 patients of Gridhrasi.

Signs & symptoms	Mean score		% relief	Paired 't' test			
	BT	AT		SD(±)	SE (±)	t	p
Toda	2.2 2	0.7 7	65	1.01	0.3 3	4.3 6	<0.01
Tenderness	2.0 0	0.4 4	77	1.13	0.3 7	4.0 5	<0.01
Tandra	2.5 0	0.8	68	0.82	0.2 6	6.5 0	<0.01
Gaurava	2.4	0.9	62.5 0	0.70	0.2 2	6.8 1	<0.00 1
Arochaka	2.5 0	0.3 7	85	0.64	0.2 2	9.6 3	<0.00 1
Supti	2.3	0.8 8	61.9	0.88	0.2 9	4.9 6	<0.01
Graha	2.4	0.9	62.5	0.70	0.2 2	6.8 1	<0.00 1

Table 3: Effect of therapy on the clinical tests of 25 patients of Gridhrasi.

Clinical test (SLR)	Mean score		% relief	Paired 't' test			
	BT	AT		SD(±)	SE (±)	t	p
Affected left leg in 15 pts.	46.1 1	66.6 6	42.7 3	7.68	2.5 6	8.0 2	<0.00 1
Affected Rt. leg in 10 pts.	53.3 3	72.5 0	25.3 5	7.35	3.0	6.3 7	<0.01
Average	49.7 2	69.5 8					
Walking time	35.2 5	26.3 5	25.4 5	4.16	1.3 1	6.8 7	<0.00 1
Stepping time	55.6 5	43.4 5	21.9 2	8.27	2.6 1	4.6 7	<0.01
Muscle	2.50	3.75	33.3	0.96	0.2	4.4	<0.00

power		3		8	8	1
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Table 4: Total effect of therapies on 25 patients.

Cured	Markedly improved	Improved	Unchanged	Total
10 (40%)	12 (48%)	3 (12%)	0 (00%)	25(100%)

Out of 25 patients, after completion of treatment 10 patients (40%) were cured and 12 patients (48%) were markedly improved remaining three patient (12%) was reported as improved. None of the patient was found unchanged.

DISCUSSION

Gridhrasi is observed mainly due to three types of cause Santarpanajanya Nidana and Apatarpanajanya Nidana, the third stream of causes is Abhigataja or Agantuja. Rasa, Rakta, Meda, Asthi, Majja Dhatus are affected in this disease. Due to Rukshadi Ahara Vihara the Snigdha Pradhana Majja, Medadi Dhatus are not nourished well and lead to Meda, Mansa and Majja Kshaya. Asthi Purana Karma is disturbed and Asthi Dhatu becomes Sushira, Durbala especially at Sandhies of Kati and Sphik. Gridhrasi Nadi / Snayu / Kandara is vitiated, hence the Lakshanas like Ruk, Toda, Stambha etc. are produced. Santarpana Janya Nidanas cause the Agnimandya leads to Ama Ahara Rasa, which does the Margavarodha of Srotas, leads to obstruction in Vatagati and hence the Vataprakopa occurs and sometimes Kapha involves. Due to vitiation of Vyanavata the Dhatu Vyuhana Karma of Vyana is hampered that leads to Aprakrita (improver place or volume), Dhaturiddhi and due to this at Kati, Sphik region Gridhrasi Nadi Pidana occurs. Hence the Lakshanas like Ruk, Toda and due to Kaphanubandha sometimes Tandra, Gaurava, Arochaka are produced.

As far as the aetiopathology of Gridhrasi is concerned Vata Vaigunya is important. It essentially plays a role in the overstimulation of the nerve as experienced by severe pain in the course of affected part.

Vata is the main factor producing the disease Gridhrasi. Other Doshas may be involved. Lakshanas of Gridhrasi are described as starting from Sphik, Kati then Uru, Janu, Jangha upto Pada,^[2] pain is involved in

order, which clearly resembles with the affected course of sciatic nerve. The initiation of pathology at lumbo sacral (L4, L5, S1) joints and hip joint can be estimated by the word *Sphikpurva* and *Katipurva* and the *Pristha* underlines that especially the back of the thigh, knee, leg is involved, which is the location of sciatic nerve and its branches.

The *Lakshanas* like *Ruk*, *Toda*, *Stambha*, *Graha*, *Spandana* are indicative of pain. In *Vatakaphaja* type of *Gridhrasi* additional symptoms like *Tandra*, *Gaurava* and *Arochaka* are also found.

Sushruta while describing *Gridhrasi* has more emphasized on the involvement of *Kandara* from *Parsni* to *Anguli* and has given one important sign that is '*Nigraha* of *Sakthanakshepan*'^[6] (that is restricted forward movement popularly known as straight leg raising test in this time. *Astanga Hridaya* and *Astanga Samgraha* have followed *Sushruta* for describing the *Gridhrasi*, but *Madhava Nidana* preferred the description of *Charaka* and has quoted two more *Slokas* which describe additional symptoms of *Vataja* and *Vatakaphaja* types of *Gridhrasi*. It includes *Dehasya Pravakrata*, *Stabdhatta* and *Sphurana* of *Janu*, *Jangha*, *Kati* and *Urusandhi* for *Vataja Gridhrasi* and *Vahni Mardava*, *Mukhapraseka* and *Bhaktadvesha* for *Vatakaphaja* type of *Gridhrasi*.

Now coming to the management of the disease, in removing the *Vata Vaigunya* pertaining to the disorder, *Shodhana* therapy should be indicated. *Shodhana* removes out the vitiated *Doshas* by nearest channel that leads to root out the disease. Among the *Shodhana* procedure. *Eranda Taila* was specially mentioned in *Gridhrasi*, so the judicious compound of *Eranda Taila* and *Panchakola Kwatha* with *Nishoth* was administered as *Sneha Virechana*.

Mrudu Virechana

If the vitiated *Doshas* are more in amount and no relief is acquired by *Snehana*, *Swedana*, then only *Mrudu Virechana* is indicated for the *Dosha Shodhana*.^[3] They have already brought to *Kostha* by *Snehana* and *Swedana* and can be easily derived out by *Mrudu Virechana*. *Trivrutta*, *Eranda*. *Aragvadha* etc. are used for this purpose. *Virechana* removes the *Maladravyas*, increases *Agni*, purifies *Srotas*, *Dhatu*

and destroys the *Vyadhi*.^[7] Though it is especially indicated in *Pittapradhana* and *Rakta Pradoshaja Vyadhies*, it is also useful in *Vata Vyadhies* as it does the systemic purification of *Doshas* and affects the whole *Dhatupariposhan Karma*.

Yograj Guggulu with *Maharasnadi Kwatha* as *Shamana* therapy is mentioned in *Sharangdhara Samhita*,^[5] a good remedy for *Gridhrasi*.

Effect of therapies on signs and symptoms

The effect of therapies was assessed on each sign and symptoms of *Gridhrasi*. These signs and symptoms were given score before and after treatment and were assessed statistically to see the significance. The effect of both therapies on each symptom was follows.

Total effect of therapies

Among 29 patients, 4 patients (33.33%) was cured. While 5 patients (50%) showed markedly improvement. Whereas 1 patient showed improved result. None of the patient was in unchanged result. Thus the overall effect of *Shodhana* with *Shamana* drug was good.

We used *Eranda Taila* and *Panchakola Kwatha* and *Nishotha Churna* for *Virechana Karma*. It might have worked on vitiated *Kapha* also that resulted in reducing of *Vatakaphaja* symptoms.

In this study the *Mrudu Virechana* therapy has shown beneficial effect in correction of *Dushti* of *Doshas*, *Dushyas* and *Srotas* as well it has shown beneficial effect on the signs and symptoms of the patients of *Gridhrasi*.

CONCLUSION

So it is justified from this study that in the disease *Gridhrasi*, *Shodhana* should be done prior to giving the internal medicine. *Mrudu Virechana* with *Sneha* is especially efficacious in this disease. The *Eranda Sneha* is a better drug for this purpose.

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