Clinical Evaluation of *Agnitundi Vati* in the management of *Gridhrasi* With special reference to Sciatica

Research Article

Gabhane S M[1]*

1. Professor, Department of Rognidan-Vikritivigyan,
Datta Meghe Ayurvedic Medical College Hospital and Research Center, Wanadongri, Nagpur.

Abstract

In the present era, *Gridhrasi* is the commonly occurring disease in both geriatric and middle age. It causes due to irritation of sciatic nerve. According to *Ayurveda,vataprakopak nidanas* i.e. depletion of *dhatu* and obstruction of channels are the causes of *Gridhrasi*. *Vata* plays a major role in pathogenesis of the disease but sometimes associated with *kapha*. *Agnitundi Vati* described in *Sharangadharsamhita* has the properties acting on both *vata* and *kapha*. To assess the efficacy of *Agnitundi vati* in the management of *Gridhrasi*, present study was undertaken in 30 patients of both types of *Gridhrasi*. 125- 250 mg of *Agnitundi Vati* was given orally, two times daily after meal with lukewarm water for total 21 days. It showed hopeful results in subjective and objective parameters of *Gridhrasi*. The study shows that *Agnitundi vati* is effective in management of both types of *Gridhrasi*, but more effective in *vata-kaphaj Gridhrasi*.

Key Words: *Gridhrasi, Vataprakopak nidanas, Vata, Kapha, Agnitundi vati.*

Introduction

Sciatica is characterised by constant aching pain in the lumber region radiating to the buttock, calf and foot caused by irritation of the sciatic nerve. (1) It is quite a common condition with a lifetime incidence varying from 13% to 40%. The consequent annual incidence of an episode of sciatica ranges from 1% to 5 %. (2)

It can be compared to *Gridhrasi* described in *ayurvedic* text having pricking pain, twitching along the route of sciatic nerve. It occurs both in old and middle age. It is one of the 80 types of *Nanatmaja vyadhi* of *vata*. (3) The general *vata prakopa nidanas* are *nidanas* of Gridhrasi such as improper sitting posture, over exertion, over loading, trauma to lumbosacral spine, production of *ama*, jerky movements during travelling etc. (4) The *samprapti* of *Gridhrasi* is a complex mechanism. The *vata* provoked by the above-mentioned factors, either by depletion of *dhatu* or by the occlusion of channels, enters the empty *majjavaha srotas* and leads to *Gridhrasi*. (5)

The cardinal features of *Gridhrasi* are *ruk*(pain), *toda*(pricking sensation),*stabdhata*(stiffness), *spandana*(twitching) in the buttocks, low back region radiating to thigh, knee, calf region and foot,whereas *arochak* (aversion to food), *tandra*(drowsiness),and *gaurava*(feeling of heaviness) come across additionally when *kapha* is associated with *vata*. (6) Due to severe pain, it creates little threat to life. Treatment of the disease includes analgesics, traction therapy and physical therapy. Surgery i.e. removal of disc herniation also recommends according to stage. This treatment reduces only leg pain and corresponding symptoms, not the back pain and the chances of recurrence are more.

Vata plays major role in the pathogenesis of the disease but most of the times associated with *kapha*. Alsobeing a nervine disorder, can be treated by a drug having *deepana*, *pachana, vatashamaka* and *shoolaghna* properties along with having action on nerves. *Agnitundi vati* mentioned in *Sharangadhara samhita* is having all the properties. (7) This drug is using being successfully to cure *vatarogas*. But it is need to study on *scientific* measures to make more use of it.

Materials & Methods

Objective of the study

To evaluate the efficacy of *Agnitundi Vati* in the management of *Gridhrasi*.

Source of Data

Patients attending the OPD and IPD of the Department of Rognidan- Vikritivigyan and Dept of Kayachikitsa, Pakwasa Samanvay Rugnalaya and Dept of Rognidan- Vikritivigyan of Akhil Bhartiya Ayurved Anusandhan, Nagpur.

Method of Collection

30 participants fulfilling the diagnostic and inclusion criteria, belonging to either sex irrespective of socio-economic status and caste were selected and registered for the clinical study. *Prakriti*, addiction, gender, occupation of the patients was also studied.

* **Corresponding Author:**
Gabhane S M,
Professor, Department of Rognidan-Vikritivigyan,
Datta Meghe Ayurvedic Medical College Hospital and Research Center, Wanadongri, Nagpur.
Email id - mungle.shilpa@gmail.com

Diagnostic criteria

Patients were diagnosed on the basis of following clinical features

1. Patients having cardinal symptoms of *Gridhrasi* like *Ruk, Toda, Stambha* and *Spandana* in *Sphik, Kati* radiating to *Prishthabhaga* of *Uru, Janu, Jangha* and *Pada*.

2. Positive straight leg raises (SLR) test in affected leg.

Inclusion Criteria

1. Patients fulfilling the diagnostic criteria.
2. Patients of both sex between age group 20- 65 years.

Exclusion Criteria

1. Benign or Malignant tumour of spine, traumatic injury, Tuberculosis of vertebral column.
2. Developmental anomalies.
3. Uncontrolled diabetes mellitus, cardiovascular diseases.
4. Pregnant and Lactating women.

Laboratory Investigation (Objective Parameter)

- Routine haematological investigation- Hb%, TLC, DLC, ESR
- Urine for routine and microscopic examination
- X-ray of Lumbosacral spine – AP and Lateral view.

Plan of Treatment

125- 250 mg of *Agnitundi Vati* was given orally, two times daily after meal with lukewarm water for total 21 days. A gap of 1 day was given in between two weeks.

Weekly follow up was taken.

Agnitundi Vati was prepared in Universal Pharmacy, Nagpur.

Contents of Agnitundi vati:

Bhavana Dravya- Jambeera(Citrus Limon)

Ingredients	Quantity
Parad(Mercury)	1 part
Gadhak (Sulphur)	1 part
Vatsanabh (Aconitum ferox)	1 part
Haritaki (Terminalia chebula)	1 part
Bibhitak (Terminalia belerica)	1 part
Amalaki (Phyllanthus emblica)	1 part
Chitrak (Plumbago zeylanica)	1part
Jeerak (Cuminum cyminum)	1part
Ajamoda (Carum Roxburghianum DC)	1part
Vidanga (Emblica ribes)	1part
Shunthi (Zingiber officinale Roscae)	1part
Marich (Piper nigrum)	1part
Pippali (Piper longum)	1part
Sarji kshara	1part
Yava kshara(Potasii carbons)	1part
Saindhava (Sodii chloridum)	1part
Sauvarchala (Unaqna sodium chloride)	1part
Samudra (Sodii muras)	1part
Kupeelu (Strychnos nux-vomica Linn)	18 parts

Assessment Criteria

Subjective and objective parameters presented by the patients were given score and were assessed before and after every week for 3 weeks.

Gradation for Subjective parameter

Ruk (Pain)
- 0: No pain
- +: Painful but walks without limping
- ++: Painful, walks with limping but without support
- +++: Painful, can walk only with support
- ++++: Severe pain, unable to walk

Stambha (Stiffness)
- 0: No stiffness
- +: Mild Stiffness
- ++: Moderate stiffness
- +++: Severe stiffness
- ++++: Very severe stiffness

Spandana (Twitching)
- 0: No twitching
- +: For few minutes occasionally
- ++: Daily once in a day for few minutes
- +++: Many times, in a day affecting daily routine
- ++++: Daily for many times severely hampering daily routine

Arochak
- 0: Absent Arochak
- +: Mild Arochak
- ++: Moderate Arochak
- +++: Severe Arochak

Gaurava
- 0: Absent Gaurava
- +: Mild Gaurava
- ++: ModerateGaurava
- +++: Severe Gaurava

Tandra
- 0: Absent Tandra
- +: Mild Tandra
- ++: Moderate Tandra
- +++: Severe Tandra

Gradation for SLR
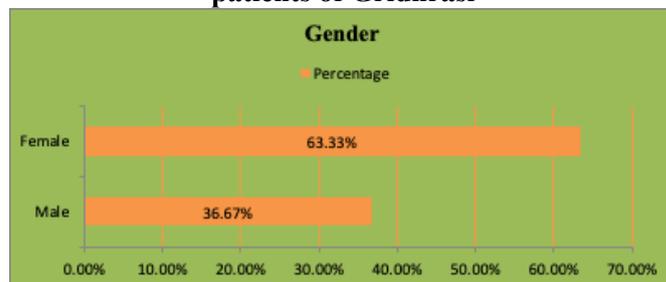- 0: Equal to or greater than 900
- +: 710 to < 900
- ++: 510 – 700
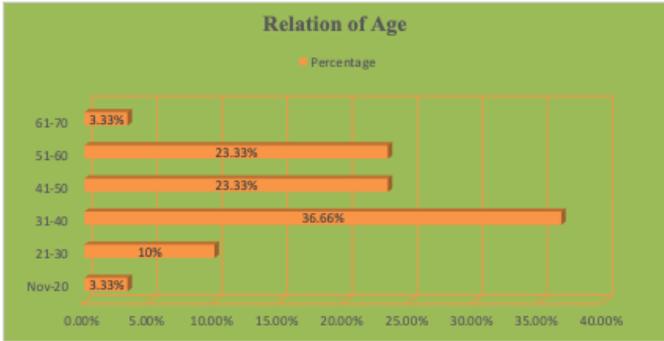- +++: 310 - 500
- ++++: <300

Observations and Result

Total 30 patients of *Gridhrasi* were registered. Important features were as follows:

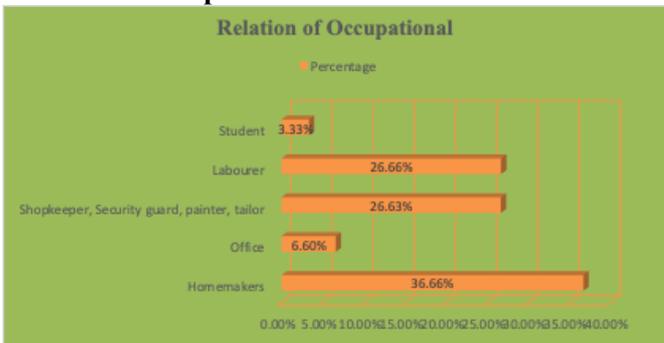**Graph 1. Showing the distribution of gender in 30 patients of Gridhrasi**

Maximum, 63.3% were females.

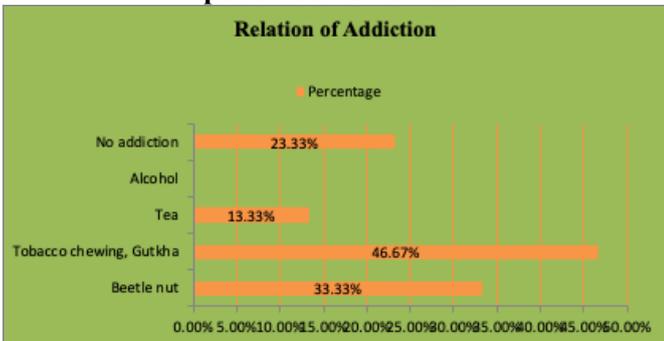**Graph 2. Showing the relation of age in 30 patients of Gridhrasi**

Maximum, 36.66% were in age group 31 -40 and 86.65% were in the age group of 31 – 60 years.

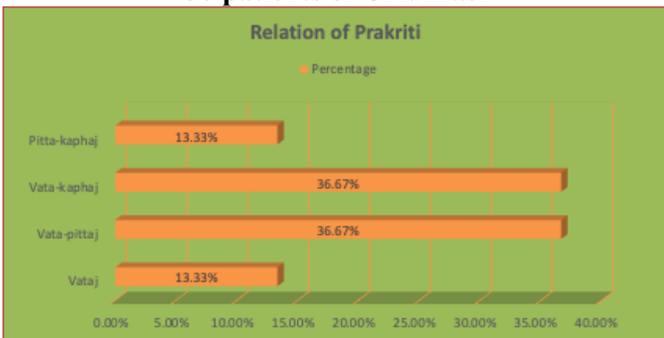**Graph 3. Showing the relation of occupation in 30 patients of Gridhrasi**

Maximum, 36.66%were homemakers,

Graph 4. Showing the relation of Addiction in 30 patients of Gridhrasi
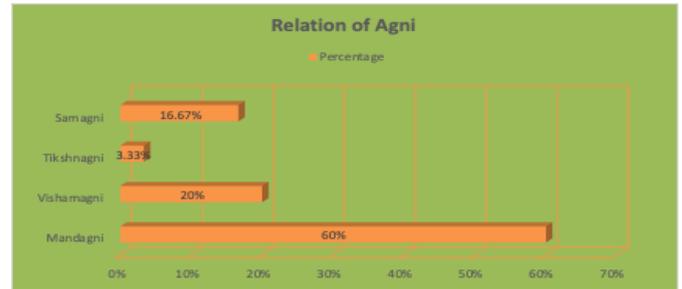

Maximum, 46.67% were having addiction of tobacco chewing and gutkha and 33.33% having addiction of beetle nut.

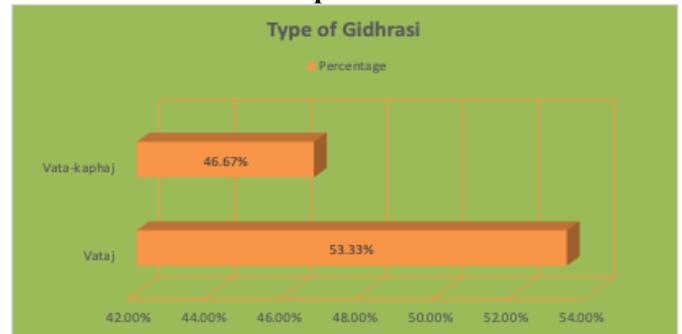**Graph 5. Showing the Prakriti wise distribution in 30 patients of Gridhrasi**

According to *prakriti*, 36.67% patients were of *vata-kaphaj* and 36.67% were of *vata-pittaj prakriti*.

Graph 6. Showing the relation of Agni in 30 patients of Gridhrasi
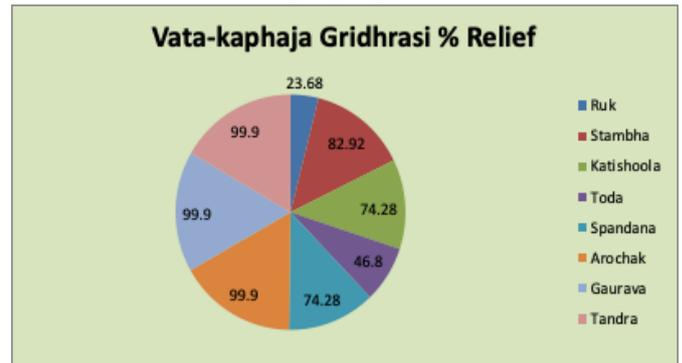

According to *agni*, majority of patients i.e. 60% were having *mandagni*.

Graph 7. Showing the type of Gridhrasi occurred in 30 patients

53.33% patients were diagnosed as *vataj Gridhrasi* and 46.67% patients as *vata-kaphaj Gridhrasi*.

Graph 8. Showing the relief in Vata-kaphaja Gridhrasi

Graph 9. Showing the relief in Vataja Gridhrasi

Table 8. Effect of treatment in sign and symptoms

Signs & Symptoms	Mean		% Relief	'P' value
	BT	AT		
Ruk	2.53	1.93	23.68	<0.01
Stambha	1.367	0.233	82.92	<0.001
Katishoola	1.367	0.233	74.28	<0.001
Toda	1.567	0.833	46.80	<0.001
Spandana	0.966	0.066	74.28	<0.001
Arochak	0.4667	0	99.9	<0.001
Gaurava	0.4667	0	99.9	<0.001
Tandra	0.4667	0	99.9	<0.001
SLR test Rt. leg	1.39	0.42	69.78	<0.001
SLR test Lt. leg	1.27	0.55	56.69	<0.001

BT- Before Treatment   AT- After Treatment

Agnitundi Vati was found more significant 74.28% in (*Katishoola*) pain, 82.92% in (*Stambha*) stiffness, 46.80% in *(Toda)* pricking sensation, 74.28% in *(Spandana)* twitching, 99.9% relief was found associated symptoms such as *arochak, gaurava, tandra.*

The symptom *sphik prarambhata* found in 60% patients.

Cardinal symptom of *ruk, toda* and positive SLR test were found in all patients.

76.67% patients were having symptoms in right leg.

The drug is found highly effective in SLR test 73.80%.

Criteria for assessing the effect of therapy

The effect of therapy was evaluated on the basis of improvement in sign and symptoms. Statistical analysis, means, standard deviations and standard errors and percentages were calculated. Kruskal Wallis Test with Dunn's Multiple Comparison Test was applied for assessing sign and symptoms. Mann Whitney's Test was applied for assessing laboratory investigations.

The obtained results were interpreted as:
$P> 0.05$- Not significant
$P< 0.05$ - Significant
$P< 0.01$ - More significant
$P<0.001$ -Highly significant

The obtained results were classified as:
Marked improvement: 75% - 100% relief
Moderate improvement: 51% - <75% relief
Mild improvement: 25% -50% relief
Unchanged :< 25% relief

Discussion

The maximum number of patients was present between 31-40 age groups. In *vataprakriti* individuals *vatavriddii* starts at this age. As age increases, the form and composition of the individual structure may increase the risk of injury due to decrease in hydration of inter vertebral disc. (8) This decrease in hydration may be due to *rukshata* which increases as a result of *vatavriddhi*. Prevalence commonly found in this age group.

Sex- the higher incidence of disease occurred in females. (9)

There was higher incidence of sciatica in homemakers. Working constantly with improper posture for long duration during household work, lack of exercise; irregular food habits and cold exposure are the contributing factors. Labourer also show comparatively high incidence because of heavy work they do. (10)

A high proportion of patients were having *vatapittaj* and *vatakaphaj prakriti* suggesting that vata has major role in the manifestation of sciatica

Maximum patients were having addiction of beetle nut, tobacco chewing and gutkha. These factors lower the bone mineral density causing osteoporosis. It causes osteoporotic vertebral fractures compressing the sciatica nerve thereby responsible for nervine damage. (11) As beetle nut is *kashaya* in rasa, it vitiates *vata*.(12)

Effect of therapy

Kupeelu (*Strychnos nux-vomica Linn*.) is the major content of drug which is more effective in nervine disorders. It improves stimulatory function of *vata*, when function of *vata* decreases due to association with *kapha*.

All contents of *Agnitundi vati* are *deepana, pachana, vatashamaka* and *shoolaghna* in properties. Due to its *ushna virya* it normalises the function of *apana* and *vyanavayu.* (13)

Conclusion

The drug *Agnitundi vati* showed good results in both types of *Gridhrasi*, but better relief seen in *vata-kaphaj Gridhrasi.* Ingredients of this vati having *deepana, Amapachana, vatashamaka* and *shoolaghn*a properties. it improves *agni* by digesting *ama* which is the main factor in *vatakaphaj Gridhrasi.* In this way relieves generalised symptoms such as *aruchi, gaurava* and *tandra*. This drug   works at the root level of *samprapti* and minimizes chances of recurrence.

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