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## An open labelled, randomized clinical Study to evaluate the efficacy of *Pinda Sveda* in the management of *Gridhrasi*

Sedentary life style, lack of physical activities and irregular food habits made human being prone to chronic diseases. *Gridhrasi*, one among *Vataja Nanatmaja Vikaras*, and commonly correlated with inter vertebral disc prolapse (IVDP), is one of the most common diseases human being suffers nowadays. *Sveda* is one of the treatment for *Vata Dosha* mentioned in Ayurveda. *Pinda Sveda* has shown good improvement in the conditions of the patients of *Gridhrasi* supporting the concept that *Sveda* controls *Vata Dosha*. Hence *Pinda Sveda* can be very effective in the management of *Gridhrasi*.

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# An open labelled, randomized clinical Study to evaluate the efficacy of *Pinda Sveda* in the management of *Gridhrasi*

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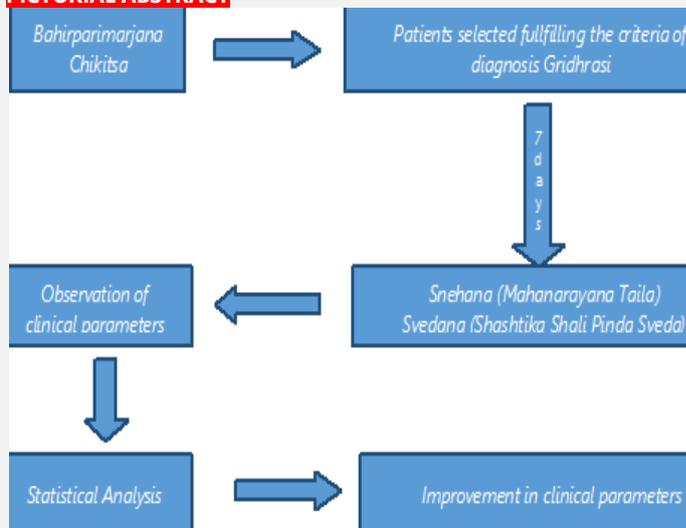
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## ABSTRACT

**Background:** Sedentary life style, lack of physical activities and irregular food habits made human being prone to chronic diseases. *Gridhrasi*, one among *Vataja Nanatmaja Vikaras*, and commonly correlated with inter vertebral disc prolapse (IVDP), is one of the most common diseases human being suffers nowadays. *Sveda* is one of the treatment for *Vata Dosh*a mentioned in Ayurveda. In the present study, *Pinda Sveda*, a type of *Sveda*, has been evaluated as treatment protocol for IVDP. **Methods:** Patients with complaints of low back ache and fulfilling the criteria of diagnosis *Gridhrasi* were selected. *Pinda Sveda* was administered for seven days and improvements were assessed after seven days. **Results:** Statistically highly significant ( $P < 0.001$ ) improvements were seen in clinical features like *Aruchi*, *Stambha*, *Ruk*, *Toda*. Improvements were also observed in subjective parameters like pain, consultation, work, rest, housework, sitting, walking and travelling using Visual Analogue Scale and Greenough Fraser Scoring for pain. Statistically highly significant results were also obtained in Sugarbaker & Barofsky Clinical Mobility test parameters like upright, walk, gait, sitting and climbing stairs. Statistically highly significant results were seen in Oswestry disability assessment parameters such as pain, lifting, walking, sitting, standing and travel. Statistically significant ( $P < 0.05$ ) results were obtained in stiffness, heaviness and lassitude; and in subjective parameters like straight leg raising test (both right and left), Greenough Fraser Scoring Method for pain and Oswestry disability assessment parameters. **Conclusion:** *Pinda Sveda* though not directly mentioned in the management of *Gridhrasi*, has shown good improvement in the conditions of the patients of *Gridhrasi* supporting the concept that *Sveda* controls *Vata Dosh*a. Hence, it is concluded that *Pinda Sveda* can be very effective in the management of *Gridhrasi*.

**KEYWORDS** *Gridhrasi*, intervertebral disc prolapse, *Pinda Sveda*.

## PICTORIAL ABSTRACT



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## 1. INTRODUCTION

Man, the most developed and sophisticated living being on earth, desires not only to live long, but also to live a long, happy and disease free life as far as possible. But, the present way of living has made him to suffer from many disorders quite frequently.

Ayurvedic classics have explained 80, 40 and 20 types of *Vataja*, *Pittaja* and *Kaphaja Nanatmaja Vyadhis* respectively. This indicates the role of *Vata* in disease manifestation and more incidences of *Vataja Vyadhis* even in those days.

*Gridhrasi*, a *Vataja Nanatmaja Vyadhi*, is named on the feature that the patient will be having the gait of a *Gridhra* (vulture). As Ayurvedic classics explain, it is a disease characterized by pain radiating from *Sphik* (low back) to *Pada*

(feet). In present days too, most number of people are getting affected with *Gridhrasi* quite frequently and nowadays most of them are in search of an alternate treatment other than surgery. Ayurveda had explained the management of this in the form of internal administration of *Aushadha Dravyas* (medicines), *Snehana*, *Swedana* and even *Agni Karma*. Patients get very good result from these treatment modalities especially when medicines are administered with *Snehana* and *Swedana*.

*Shashtika Shali Pinda Sveda* (a variety of fomentation where fomentation is given using rice made into bolus in a cloth) is not specifically mentioned for the treatment of *Gridhrasi*. But as per the Ayurvedic concept, *Swedana* should reduce pain, stiffness and other *Vata Vriddhi* clinical features like *Kampa*,

*Balabhramsha*, etc. Hence this particular treatment has been taken.

Aim of the study is to evaluate the efficacy of *Bahirparimarjana Chikitsa* in the form of *Pinda Sveda* in the management of *Gridhrasi*, a *Vata Vriddhi* condition.

## 2. MATERIALS AND METHODS

Individuals attending the OPD of Panchakarma were selected for the study with the complaints of back ache irrespective of sex, religion, etc. After that, detailed history and examination was done.

### 2.1 Inclusion criteria

Individuals of either sex with age more than 20 years have been selected irrespective of their caste, creed having the features like *Stambha* (stiffness), *Ruk* (pain), *Toda* (pricking type of pain), *Spandana* (twitching) and *Grahnaati* (a feeling of tightness) have been included.

### 2.2 Exclusion criteria

Patients suffering from other chronic disorders like diabetes mellitus, tuberculosis and other systemic disorders were excluded.

### 2.3 Method of study

Thirty patients fulfilling the criteria were admitted in the IPD of SDM Ayurveda Hospital, Kuthpady, Udupi. *Snehana* with *Mahanarayana Taila* followed by *Shashtika Shali Pinda Sveda* (400 gm of *Shashtika Shali* were boiled in half a litre of *Balamoola Kashaya*; afterwards, boiled *Shashtika Shali* was tied in a cloth piece and four boluses were made. During the procedure the boluses were made *Ushna* repeatedly by dipping in quarter a litre of *Balamoola Kashaya* which was kept hot throughout the procedure) was given for seven days.

### 2.4 Assessment criteria

Symptomatic relief of the complaints of *Stambha*, *Ruk* (radiating pain from back to feet), *Toda*, *Spandana* & *Grahnaati* (*Vataja Gridhrasi*) and *Aruchi*, *Gaurava* & *Tandra* (*Vatakaphaja Gridhrasi*) as mentioned in the classics were assessed. Validated scoring method was followed to assess the condition before and after treatment in the above features.

Along with above, SLR (straight leg raising) test, Bragard's test<sup>[1]</sup>, Lasegue's sign<sup>[2]</sup>, Schober's test<sup>[3]</sup> and VAS (Visual Analogue Scale)<sup>[4]</sup>, Greenough & Fraser (GF) Scoring method (for assessing pain)<sup>[5]</sup>, Sugarbaker & Barofsky Clinical Mobility (SBM) Test (for assessing functional ability)<sup>[6]</sup> and Oswestry disability

assessment questionnaire (for assessing functional disability)<sup>[7]</sup> were also assessed to study the efficacy of the treatment.

### 2.5 Statistical evaluation

Statistical analysis was carried out using Statistical package for social Science (SPSS) Version 20. Wilcoxon Signed Rank Test (non-parametric) was used for subjective criteria with  $P < 0.05$  considered statistically significant;  $P < 0.001$  considered highly significant and  $P > 0.05$  not significant.

### 2.6 Ethical clearance

Ethical clearance has been obtained by Institutional ethics committee; Ref. no. SDM-CAU-IEC/2013-14/No: RGHUS-01

### 2.7 Observations

Registered 30 patients were administered with *Shashtika Shali Pinda Sveda* for seven days. There were no dropouts. During the procedure, no other medicaments were administered (including oral medicines). Table 1 shows the observation of 30 patients related to demographic data & disease which is analysed on the basis of descriptive statistics.

**Table 1. Observation of demographic characters of 30 patients**

Observation	Maximum incidence	Percentage
Age	51 – 60	33.3%
Sex	Male	53%
Religion	Hindu	90%
Socio-economic status	Lower middle class	56.7%
Occupation	Physically strenuous	90%
Diet	Mixed (veg & non veg)	80%
Prakriti	Vata-Pitta	50%
Dosha	Vata Vriddhi	100%

## 3. RESULTS AND DISCUSSION

Effect of therapy on the features of *Gridhrasi* has been shown in Table 2. The analysis was done on the basis of Wilcoxon Signed Rank Test using SPSS Statistics.

*Gridhrasi* is a *Vataja Nanatmaja Vikara*. It has been classified into two as *Vataja* and *Vatakaphaja* based on clinical presentation. Patients dominantly present with features like *Ruk*, *Toda*, *Stambha*, *Spandana* (*Vata* dominant) and *Aruchi*, *Gaurava*, *Tandra* (when associated with *Kapha*). Both *Vata* and *Kapha* are

having *Sheeta Guna*. In the management of *Gridhrasi*, *Svedana Chikitsa* is not directly explained. Rather *Ushna Upanaha* has been in the classics<sup>[9]</sup>. In *Sutrasthana*, *Acharya Charaka* has mentioned that *Vata* (and *Kapha*) aggravation can be overcome by *Svedana Karma*<sup>[10]</sup> effectively as *Svedana Karma* is *Ushna Guna* dominant<sup>[11]</sup>.

**Table 2. Effect of Shashtika Shali Pinda Sveda in 30 patients of Gridhrasi**

Parameter		Negative ranks			Positive ranks			Ties	Total	Z value	P value	Inference
		N	MR	SR	N	MR	SR					
Appetite	BT -AT	00	00	00	11	6	66	19	30	-3.207	0.001	HS
<i>Stambha</i>	AT - BT	26	13.50	351.00	00	00	00	04	30	-5.014	0.000	HS
<i>Ruk</i>	AT - BT	30	15.50	465.00	00	00	00	00	30	-5.152	0.000	HS
<i>Toda</i>	AT - BT	30	15.50	465.00	00	00	00	00	30	-5.396	0.000	HS
<i>Spandana</i>	AT - BT	00	00	00	00	00	00	30	30	0.000	1.000	NS
<i>Grahnaati</i>	AT - BT	07	04.00	28.00	00	00	00	23	30	-2.646	0.008	S
<i>Aruchi</i>	AT - BT	04	02.50	10.00	00	00	00	26	30	-1.890	0.059	NS
<i>Gaurava</i>	AT - BT	08	04.50	36.00	00	00	00	22	30	-2.714	0.007	S
<i>Tandra</i>	AT - BT	05	03.00	15.00	00	00	00	25	30	-2.236	0.025	S
SLR (Right)	AT - BT	10	05.50	55.00	00	00	00	20	30	-3.162	0.002	S
SLR (Left)	AT - BT	10	05.50	55	00	00	00	20	30	-3.162	0.002	S
VAS (Right)	AT - BT	28	14.50	406.00	00	00	00	02	30	-4.786	0.000	HS
VAS (Left)	AT - BT	24	12.50	300	00	00	00	06	30	-4.613	0.000	HS
GF (Pain)	AT - BT	00	00	00	30	15.50	465.0	00	30	-5.260	0.000	HS
GF(Consultation)	AT - BT	00	00	00	29	15.00	435.0	01	30	-5.303	0.000	HS
GF (Work)	AT - BT	00	00	00	30	15.50	465.0	00	30	-5.477	0.000	HS
GF (Rest)	AT - BT	00	00	00	14	07.50	105.0	16	30	-3.375	0.001	HS
GF (Housework)	AT - BT	00	00	00	22	11.50	253.0	08	30	-4.600	0.000	HS
GF (Sports)	AT - BT	00	00	00	05	03.00	15.00	25	30	-2.236	0.025	S
GF(Dress wearing)	AT - BT	00	00	00	09	05.00	45.00	21	30	-3.000	0.003	S
GF (Sitting)	AT - BT	00	00	00	29	15.00	435.00	01	30	-5.109	0.000	HS
GF (Walking)	AT - BT	00	00	00	30	15.50	465.0	00	30	-5.203	0.000	HS
GF (Sleep)	AT - BT	00	00	00	10	05.50	55.00	20	30	-2.889	0.004	S
GF (Travel)	AT - BT	00	00	00	28	14.50	406.0	02	30	-5.209	0.000	HS
GF (Sexual life)	AT - BT	00	00	00	03	02.00	06.00	27	30	-1.732	0.083	NS
SBM (Upright)	AT - BT	00	00	00	28	14.50	406.0	02	30	-5.209	0.000	HS
SBM (Walk)	AT - BT	00	00	00	30	15.50	465.0	00	30	-5.609	0.000	HS
SBM (Gait)	AT - BT	00	00	00	27	14.00	378.0	03	30	-4.973	0.000	HS
SBM (Sitting)	AT - BT	00	00	00	28	14.50	406.0	02	30	-5.209	0.000	HS
SBM (Stair climbing)	AT - BT	00	00	00	30	15.50	465.0	00	30	-5.396	0.000	HS
Oswestry (Pain)	AT - BT	30	15.50	465.0	00	00	00	00	30	-5.151	0.000	HS
Oswestry(Personal care)	AT - BT	05	03.00	15.00	00	00	00	25	30	-2.236	0.025	S
Oswestry (Lifting)	AT - BT	25	13.00	325.00	00	00	00	05	30	-4.914	0.000	HS
Oswestry (Walking)	AT - BT	29	15.00	435.00	00	00	00	01	30	-5.014	0.000	HS
Oswestry (Sitting)	AT - BT	29	15.00	435.00	00	00	00	01	30	-5.019	0.000	HS
Oswestry (Standing)	AT - BT	29	15.00	435.00	00	00	00	01	30	-5.019	0.000	HS
Oswestry (Sleeping)	AT - BT	08	04.50	36.00	00	00	00	26	30	-2.585	0.010	S
Oswestry (Sexual life)	AT - BT	00	00	00	00	00	00	30	30	0.000	1.000	NS
Oswestry (Social life)	AT - BT	00	00	00	00	00	00	30	30	0.000	1.000	NS
Oswestry (Travel)	AT - BT	26	13.50	351.00	00	00	00	04	30	-4.765	0.000	HS

33.3% patients were between the ages of 51 – 60 years.

That may not exactly suggest that *Vata* is increased, rather *Vata* has started to increase as after the age of 60 years, *Vata* dominates<sup>[12]</sup>. But, this definitely suggests that in these patients, degenerative changes have set in. Most number of patients was from lower middle class with 56.7%; this may suggest that their vigorous involvement to bring up their families. Maximum patients (90%) were involved in physically strenuous work suggesting that they were striving hard to come up in life. *Ati Vyayama* is one of the reasons for *Vata Vriddhi*. Most patients (50%) belonged to *Vata-Pitta Prakriti* and 46.7% patients belonged to *Vata-Kapha Prakriti*; this indicates that *Prakriti* too have a supporting role in the manifestation of *Vyadhi*. All the patients have shown *Vata Vriddhi* features, suggesting *Vata Prakopa* has lead to the *Vyadhi Pradurbhava*.

The present study has shown a highly considerable efficacy of *Svedana* in the management of the features of *Gridhrasi*. *Gridhrasi* is a *Vata* dominant disease which can occur due to *Prakopa* of any of the properties of *Vata* like *Sheeta*, *Rooksha*, *Laghu*, *Khara*, *Sookshma* and *Chala*. *Stambha*, *Ruk*, *Toda*, *Spandana* in either of *Pada* (feet) from *Sphik*, *Kati*, *Prishtha*, *Uru*, *Jaanu* and *Janghaa*<sup>[13]</sup>. *Svedana* is one of the six *Upakramas* having properties like *Ushna*, *Teekshna*, *Sara*, *Snigdha*, *Rooksha*, *Sookshma*, *Drava* and *Sthira*<sup>[14]</sup>. It is useful for both *Vata* and *Kapha Dosha* aggravation. In *Gridhrasi* too, the condition is either due to *Vata* or *Vata-Kapha*. By *Ushna Guna*, *Svedana* counteracts *Sheeta Guna* of *Vata*. When used in *Snigdha* form, it reduces *Rooksha Guna* of *Vata*. That is why prior to *Svedana*, *Snehana* is done in these conditions as all have shown *Vata Vriddhi* features.

Even when objective parameters are considered, significant improvement in patients clinical features were observed.

#### 4. CONCLUSION

*Pinda Sveda* though not directly mentioned in the management of *Gridhrasi* in Ayurvedic classics, has shown good result in the patients of *Gridhrasi*. It has acted upon *Vata Dosha* by virtue of its *Ushna* and *Teekshna Guna* suppressing the *Sheeta Guna*. Thus, it supports the concept that *Sveda* controls *Vata Dosha*. Hence, it is concluded that *Pinda Sveda* can be very effective in the management of *Gridhrasi*.

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**CONFLICT OF INTEREST** Nil

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**CONTRIBUTORS** Dr Shrikanth PH made substantial contributions to conceptual and intellectual content in this study by literature search, manuscript preparation-editing-review and statistical analysis. Dr. Niranjan Rao participated in clinical study by designing the study, data acquisition and data analysis.

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