

Effect Of Jambheera Pinda Sweda In The Management Of Gridhrasi W. S. R To Low Back Pain A Pilot Study.

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ABSTRACT

Gridhrasi is a musculoskeletal condition which has affected large percentage of today's population. It is characterized by features like Stamba,Ruk,Toda,Grihnati and Spandana starting from Sphik Purva to Pada[1]. Patients suffering from Gridhrasi may have restricted movements due to pain thus affecting their day-to-day activities. The present pilot study was conducted to evaluate the efficacy of Jambheera Pinda Sweda in Gridhrasi .In this study, Jambheera Pinda Sweda was selected as the treatment modality which was carried out for 7 days in 20 patients and assessment of each patient was done before treatment, after treatment (7 th day) and after follow up done after 30 days (37 th day). Significant improvement was noted in terms of both subjective and objective parameters and the results were analysed.

Keywords: Gridhrasi, Jambheera Pinda Sweda, Low back pain

1. INTRODUCTION

Gridhrasi is one among the 80 Vataja Nanatmaja Vikaras which presents with Lakshanas like Stamba,Ruk ,Toda,Grihanati and Spandana in Sphik Purva,Kati Prishtha, Uru,Janu ,Janga and Pada. The disease is named so as it alternates the gait of the person like that of 'Gridhra'[2].It is of two types:Vataja and Vatakaphaja Gridhrasi[3].The symptoms of Vataja Gridhrasi includes Toda,Dehavakrata,Sphurana and Stabdada[4] and that of Vatakaphaja Gridhrasi includes that associated with Tandra, Gourava and Arochaka[5]According to WHO, Low Back Ache has the highest prevalence among musculoskeletal conditions and has been the leading cause of disability in a population[6] By 2020,low back pain has affected 619 million population globally and by 2050 it is expected to increase by 843 million cases[7]. Prevalence has been increasing with age upto 80 years but the peak number of cases occurs in 50-55 age group especially in women.Low back pain can be acute, subacute and chronic[8] . It can be a dull type of pain or sharp pain or may radiate to other parts of body, especially to leg. People with low back pain may also experience spine related leg pain known as sciatica which may be associated with symptoms like dullness, tingling sensation etc. Due to its increasing prevalence,low back pain has been contributing to huge economic burden to society and should be considered as a global health problem.The treatment methods of Gridhrasi as per classical references include Abhyanga, Swedana, Deepana, Pachana,Vamana,Virechana,Vasti,Siravyadha,Agnikarma and Bleshaja chikitsa. Since Gridhrasi is one among the Vataavyadhi ,Snehana and Swedana play an important role in Gridhrasi Chikitsa. According to Acharya Charaka, Gridhrasi has been mentioned as one among the Sweda Sadhya Vyadhis[9] .Swedana has been proven as an effective treatment that relieves Stamba,Gourava and Sheeta[10] .According to Ashtanga Hridaya ,Ruksha Sweda is indicated in Kaphaja Rogas and Ruksha-Snigdha Sweda is indicated in Rogas involving both Kapha and Vata[11] .Jambheera Pinda Sweda is a type of Ruksha-Snigdha Sweda in which Swedana is done using poultices made up of Jambheera(Citrus aurantifolia).It can be categorised under Sankara Sweda according to Acharya Charaka and under Ushma Sweda according to Acharya Susruta and Vagbhata .In the present pilot study ,we have administered Jambheera Pinda Sweda as a treatment modality for Gridhrasi.

2. OBJECTIVE

To evaluate the efficacy of *Jambeera Pinda Sweda* in the management of *Gridhrasi*.

SOURCE OF DATA

20 patients suffering from *Gridhrasi* fulfilling the inclusion criteria were selected for the study from out-patient and in-patient departments of Bharati Vidhyapeeth Ayurveda Hospital.

DIAGNOSTIC CRITERIA

Patients with classical features of *Gridhrasi* like:

Stamba

Ruk

Toda

Grihnati

Spandana

Patients with the above mentioned symptoms in *Sphik Purva, Kati, Prishtha, Uru, Janu, Janga* and *Pada* were selected for this study.

3. INCLUSION CRITERIA

Patients within the age group of 16-70yrs

Participants with pain in low back

SLR test positive at 30-90

Participants with pain on VAS of 6 or more.

Participants of both sexes.

Participants eligible for Matra basti.

Patients fit for Swedana therapy.

Participants who are willing to give informed consent

EXCLUSION CRITERIA

Neoplastic, road traffic accidents & infective conditions of the spine

History of spinal surgery and vertebral fracture.

Patients unfit for *Swedana* therapy.

Patients who cannot answer the questionnaire will be excluded.

Patients who will not issue written consent will be excluded.

TREATMENT PROTOCOL

Patients were given *Jambeera Pinda Sweda* for 7 days. During this period no other internal medicines or external procedures were done except *Sarvanga Abhyanga* with *Tila Taila*, which is the *Purvakarma* of *Jambeera Pinda Sweda*

PREPARATION OF JAMBEERA PINDA SWEDA

Materials Required

1. *Jambeera* (*Citrus aurantifolia*)

2. *Lasuna* (*Allium sativum*)

3. *Tila Taila*

4. Coconut Gratings

Total quantity is 250 grams for single Pottali.

METHOD OF PREPARATION: The Jambheera and Lashuna are cut into pieces. Tila Taila is poured into a pan and the sliced Jambheera and Lasuna are added into it and sauté it for some time. Then add the coconut gratings and sauté it until it turns into reddish brown color. Then these contents are tied into Pottalis.

PROCEDURE OF *JAMBEERA PINDA SWEDA* ^[12]

Purvakarma

Sarvanga Abyanga is done for 10 minutes. The Pottalis are kept for heating in an iron pan.

Pradhana Karma

The *Pottalis* after getting heated is applied on the patient's body. This may be done in 7 postures of *Abyanga*. The temperature of the *Pottalis* have to be maintained by reheating the *Pottalis*. This is done for 20 minutes.

Paschat Karma

After the procedure, wipe off the oil by towel and *Rasnadi Choorna* may be applied on the vertex of the patient and the patient is asked to take bath in lukewarm water after half an hour.

ASSESSMENT CRITERIA

The assessment was done using subjective and objective parameters.

SUBJECTIVE PARAMETERS

Stamba

Ruk

Toda

Grihnati

Spandana

Gourava

Aruchi

Tandra

Suptata

Sakthikshepa Nigraha

OBJECTIVE PARAMETERS

VAS

ODI

SLR(RIGHT&LEFT)

Schober's test

Lumbar spine flexion

Lumbar spine extension

Lumbar spine lateral bending(right)

Lumbar spine lateral bending(left)

Lumbar spine lateral rotation(right)

Lumbar spine lateral rotation(left)

SWEDA SAMYAK LAKSHANAS

Sheetakshaya

Shoolakshaya

Stamba Nigraha

Gourava Nigraha

Mardava Janana

Sweda Srava

Deeptagni

Vyadhihani

- **GRADING ASSESSMENT OF SUBJECTIVE PARAMETERS**

Table 1: Table showing grading of subjective parameters

SR.NO	SYMPTOM	CRITERIA	SCORE
1	STAMBA	No <i>stamba</i> Mild <i>stamba</i> Moderate <i>stamba</i> Severe <i>stamba</i>	0 1 2 3
2	RUK	No <i>ruk</i> Painful walk without limping Painful walk with limping with support Painful walk only with support Painful & unable to walk	0 1 2 3 4
3	TODA	No <i>toda</i> Mild <i>toda</i> Moderate <i>toda</i> Severe <i>toda</i>	0 1 2 3
4	GRIHNATI	No <i>grihnati</i> Mild <i>grihnati</i> Moderate <i>grihnati</i> Severe <i>grihnati</i>	0 1 2 3
5	SPANDANA	No <i>spandana</i> Mild <i>spandana</i> Moderate <i>spandana</i> Severe <i>spandana</i>	0 1 2 3
6	GAURAVA	No <i>gaurava</i> Mild <i>gaurava</i> Moderate <i>gaurava</i> Severe <i>gaurava</i>	0 1 2 3
7	ARUCHI	No <i>aruchi</i> Mild <i>aruchi</i> Moderate <i>aruchi</i>	0 1 2

		Severe aruchi	3
8	TANDRA	No tandra Mild tandra Moderate tandra Severe tandra	0 1 2 3
9	SUPTATA	No suptata Mild suptata Moderate suptata Severe suptata	0 1 2 3
10	SAKTHIKSHEPA NIGRAHA	No sakthikshepa nigraha Mild sakthikshepa nigraha Moderate sakthikshepa nigraha Severe sakthikshepa nigraha	0 1 2 3

GRADING OF OBJECTIVE PARAMETERS

Table 2: Table showing grading of objective parameters

SL NO	PARAMETER	CRITERIA	SCORE
1	VAS	No Pain Mild Pain Moderate Pain Severe Pain	0 1-3 4-6 7-10
2	ODI	Minimal Disability Moderate Disability Moderate Disability Crippled Bed Bound	0-20% 21%-40% 41%-60% 61%-80% 81%-100%

OBSERVATIONS AND ANALYSIS

In this study, it was found that Jambeera Pinda Sweda was effective in reducing the symptoms of Gridhrasi. There was significant percentage of improvement in between the assessment done before treatment, after treatment and during follow up.

SUBJECTIVE PARAMETERS

Table 3: Table showing observations of subjective parameters

parameter		Mean		x	% of improvement
		BT	AT		
Stambha	BT-AT1	1.8	1.1	0.70	38.89%
	BT-AT2	1.8	0.5	1.30	72.22%
Ruk	BT-AT1	1.8	1.3	0.50	27.78%
	BT-AT2	1.8	0.6	1.20	66.67%
Toda	BT-AT1	2	1.2	0.80	40.00%
	BT-AT2	2	0.5	1.50	75.00%
Spandana	BT-AT1	0.4	0.2	0.20	50.00%
	BT-AT2	0.4	0	0.40	100.00%
Grihnati	BT-AT1	0.7	0.5	0.20	28.57%
	BT-AT2	0.7	0.3	0.40	57.14%
Gaurava	BT-AT1	2	1.3	0.70	35.00%
	BT-AT2	2	0.5	1.50	75.00%
Aruchi	BT-AT1	0	0	0.00	0.00%
	BT-AT2	0	0	0.00	0.00%
Tandra	BT-AT1	1	0.6	0.40	40.00%
	BT-AT2	1	0.3	0.70	70.00%
Suptata	BT-AT1	1.2	0.8	0.40	33.33%
	BT-AT2	1.2	0.3	0.90	75.00%
Sakthiksepa nigraha	BT-AT1	1.5	0.9	0.60	40.00%
	BT-AT2	1.5	0.4	1.10	73.33%

OBJECTIVE PARAMETERS**Table 4: Table showing observations of objective parameters**

Parameter		Mean		x	% of improvement
		BT	AT		
VAS	BT-AT1	7	4	3.00	42.86%
	BT-AT2	7	1.7	5.30	75.71%
ODI	BT-AT1	51.4	36	15.40	29.96%
	BT-AT2	51.4	24.8	26.60	51.75%

SLR(Right)	BT-AT1	53	70.5	17.50	33.02%
	BT-AT2	53	78	25.00	47.17%
SLR(Left)	BT-AT1	52	67.5	15.50	29.81%
	BT-AT2	52	76	24.00	46.15%
Schobers	BT-AT1	17.5	18.3	0.80	4.57%
	BT-AT2	17.5	19.1	1.60	9.14%
Lumbar Spine Flxn	BT-AT1	34	48.5	14.50	42.65%
	BT-AT2	34	54.5	20.50	60.29%
Lumbar Spine Extn	BT-AT1	25	36.5	11.50	46.00%
	BT-AT2	25	39.5	14.50	58.00%
Lumbar spine RL	BT-AT1	18.5	23.5	5.00	27.03%
	BT-AT2	18.5	25.5	7.00	37.84%
Lumbar Spine LL	BT-AT1	21.5	24.5	3.00	13.95%
	BT-AT2	21.5	26	4.50	20.93%
Lumbar spine RR	BT-AT1	21	28.5	7.50	35.71%
	BT-AT2	21	36	15.00	71.43%
Lumbar Spine LR	BT-AT1	20.5	28.5	8.00	39.02%
	BT-AT2	20.5	36.5	16.00	78.05%

SWEDA SAMYAK LAKSHANAS

Table 5: Table showing observations of sweda Samyak lakshanas

Parameter		Mean		x	% of Improvement
		BT	AT		
Seetakshaya	1 st Day-2 nd Day	0.2	0.3	0.10	33.33%
	1 st Day-3 rd Day	0.2	0.7	0.50	71.43%
	1 st Day-4 th Day	0.2	0.9	0.70	77.78%
	1 st Day-5 th Day	0.2	0.9	0.70	77.78%
	1 st Day-6 th Day	0.2	1	0.80	80.00%
	1 st Day-7 th Day	0.2	1	0.80	80.00%
	1 st Day-2 nd Day	0	0.2	0.20	0.00%

Soolakshaya	1 st Day-3 rd Day	0	0.4	0.40	40.00%
	1 st Day-4 th Day	0	0.9	0.90	90.00%
	1 st Day-5 th Day	0	0.9	0.90	90.00%
	1 st Day-6 th Day	0	1	1.00	100.00%
	1 st Day-7 th Day	0	1	1.00	100.00%
Stambha Nigraha	1 st Day-2 nd Day	0.1	0.2	0.10	50.00%
	1 st Day-3 rd Day	0.1	0.5	0.40	80.00%
	1 st Day-4 th Day	0.1	0.9	0.80	88.89%
	1 st Day-5 th Day	0.1	1	0.90	90.00%
	1 st Day-6 th Day	0.1	1	0.90	90.00%
	1 st Day-7 th Day	0.1	1	0.90	90.00%
Gaurava Nigraha	1 st Day-2 nd Day	0.2	0.3	0.10	33.33%
	1 st Day-3 rd Day	0.2	0.4	0.20	50.00%
	1 st Day-4 th Day	0.2	0.9	0.70	77.78%
	1 st Day-5 th Day	0.2	1	0.80	80.00%
	1 st Day-6 th Day	0.2	1	0.80	80.00%
	1 st Day-7 th Day	0.2	1	0.80	80.00%
Mardava Janana	1 st Day-2 nd Day	0.1	0.2	0.10	50.00%
	1 st Day-3 rd Day	0.1	0.5	0.40	80.00%
	1 st Day-4 th Day	0.1	0.8	0.70	87.50%
	1 st Day-5 th Day	0.1	1	0.90	90.00%
	1 st Day-6 th Day	0.1	1	0.90	90.00%
	1 st Day-7 th Day	0.1	1	0.90	90.00%
Swedavrava	1 st Day-2 nd Day	0.7	0.8	0.10	12.50%
	1 st Day-3 rd Day	0.7	1	0.30	30.00%
	1 st Day-4 th Day	0.7	1	0.30	30.00%
	1 st Day-5 th Day	0.7	1	0.30	30.0%
	1 st Day-6 th Day	0.7	1	0.30	30.00%
	1 st Day-7 th Day	0.7	1	0.30	30.00%
Deeptagni	1 st Day-2 nd Day	0.2	0.2	0.00	0.00%
	1 st Day-3 rd Day	0.2	0.3	0.10	33.33%
	1 st Day-4 th Day	0.2	0.6	0.40	66.67%
	1 st Day-5 th Day	0.2	0.8	0.60	75.00%

	1 st Day-6 th Day	0.2	1	0.80	80.00%
	1 st Day-7 th Day	0.2	1	0.80	80.00%
Vyadhihani	1 st Day-2 nd Day	0	0	No change	
	1 st Day-3 rd Day	0	0.1	0.10	10.00%
	1 st Day-4 th Day	0	0.2	0.20	20.00%
	1 st Day-5 th Day	0	0.3	0.30	30.00%
	1 st Day-6 th Day	0	0.9	0.90	90.00%
	1 st Day-7 th Day	0	1	1.00	100.00%

4. DISCUSSION

Probable mode of action of Swedana

Sweda is said to be the Dhatumala of Medodhatu and occurs by Paka of Sukshma Meda^[13]. The main actions of Swedana are Stambagna, Gouravagna, Sheetagna and Swedakaraka.

STAMBAGNA: Swedana is one of the Shadvidhopakramas that relieves Stamba^[14]. The drugs suitable for Swedana should have the qualities such as Ushna, Tikshna, Sara, Snigdha, Ruksha, Sukshma, Drava and Sthira^[15]. All these qualities act opposite to Stamba and thus leads to Srotoshudhi and Amapachana thus relieving Stamba.

GOURAVAGNA: Swedana relieves Gourava from body. Since Swedana is Swedakaraka and causes sweating in our body, it brings out Ap Mahabhuta out of body. Ap Mahabhuta has Guru Guna and expulsion of Ap Mahabhuta brings Laghutva to body thus relieving Gourava.^[16]

SHEETAGNA: Swedana imparts Ushna Guna to body and hence relieves Sheetagna. Ushna Guna helps in alleviating vitiated Vata as Ushna Guna is opposite to the qualities of Vata Dosha and hence has its action on Vata Vyadhi. Ushna Guna causes vasodilation thus increasing circulation in body which leads to more elimination of waste products

SWEDAKARAKA: The dravyas used for Swedana has Ushna and Tikshna gunas and they are capable of penetrating to Srotas thus producing Sweda. The Laghu and Sara Guna helps in expulsion of Sweda through micropores of skin thus leading to Srotosodhana.

SWEAT AND ELECTROLYTE BALANCE ^[17]

Sweat is primarily composed of water but it also contains electrolytes like sodium chloride, potassium calcium, urea etc. These substances are also found in the extracellular fluid, which surrounds and nourishes the cells. Sweat glands are primarily controlled by the sympathetic nervous system, a part of the autonomic nervous system. This system regulates involuntary functions like sweating, heart rate and blood pressure. Excessive sweating may also cause electrolyte deficiencies thus leading to symptoms like feeling of exhaustion, weakness, muscle cramps etc.

When Swedana is done the blood vessels become intensely dilated which is caused by inhibition of sympathetic centres in the posterior hypothalamus that causes vasoconstriction. So, vasodilation increases circulation in body thus facilitating removal of waste products and supply of essential nutrients and oxygen. This helps in relieving stamba, gourava and sheeta.

Discussion on present study

In this study, the symptoms of Gridhrasi were found to reduce effectively. There was drastic improvement in parameters such as Stamba, Ruk, Toda, Spandana, Gaurava, Tandra, Suptata, Sakthikshepa Nigraha, VAS, Lumbar spine flexion, Lumbar spine lateral rotation, Sheetakshaya, Shoolakshaya, Stamba Nigraha, Gourava Nigraha, Mardava Janana, Deeptagni and Vyadhihani. Moderate improvement was found in Grihnati, ODI, SLR, Schober's test, Lumbar spine extension and Lumbar spine lateral bending. This reveals that Jambheera Pinda Sweda was effective in reducing the symptoms of Gridhrasi and improving the range of motion of lumbar spine.

5. CONCLUSION

This pilot study was conducted to evaluate the efficacy of Jambheera Pinda Sweda in the management of Gridhrasi and it was found that Jambheera Pinda Sweda as a treatment protocol alone was highly effective in Gridhrasi. Moreover, it was found to have a profound effect in reducing the symptoms of Gridhrasi such as Stamba, Ruk, Toda, Grihnati, Spandana, Tandra,

Gourava and Aruchi. It was also found to be effective in terms of objective parameters such as

VAS, ODI, SLR, Schober's and range of motion of lumbar spine. So, this study opens a window of opportunity towards the management of Gridhrasi w.s.r to low back pain.

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