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## A Clinical Study on Evaluation of Efficacy of *Dashmuladi Kwatha* in the Management of *Gridhasi* with special reference to Sciatica

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### ABSTRACT

Changing of life style of human being has created several disharmonies in his biological system. With the advancement of busy, professional and social life, improper sitting posture in offices, factories, continuous exertion, jerking movements during traveling and sports, all these factors create undue pressure on the spinal cord and leads to low backache and sciatica. Sciatica is pain radiating through sciatic nerve trunk. It is mainly caused by compression of nerve root resulting from IVDP, osteophytes and canal stenosis. Chief symptom of sciatica is pain radiating from buttocks down to the leg. In *Ayurveda* Sciatica can be compared with *Gridhasi*. The present study comprised of 30 patients of *Gridhasi* selected from outdoor and indoor patient of R A Podar Ayurved College Worli Mumbai. Treatment included *Dashmuladi Kwatha* given with *Eranda tail*. Significant results were recorded in *Gridhrasi*, so it was concluded that trial formulation is quite effective in management of acute stage of Sciatica.

### KEYWORDS

*Gridhasi, Dashmuladi Kwatha, Eranda tail*



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## INTRODUCTION

*Gridhrasi* is one of the most important of *vatavyadhi* characterised by *ruka* (pain), *stambha* (stiffness), *toda* (piercing pain) and *gourava* (heaviness) which starts from *sphik pradesh* (hip) and radiates downwards through *pristha bhaga of kati* (waist), *pristha* (back), *uru* (thigh), *janu* (knee), *jangha* (shank) and *pada* (foot)<sup>1</sup>. In modern sciences, it is correlated with sciatica syndrome. *Gridhrasi* comes under 80 types of *Nanatmaja Vatavyadhi*<sup>2</sup>. The name itself indicates the way of gate shown by the patients due to extreme pain just like a *Gridhra* (vulture), it is clear that this disease not only inflicts pain but also causes difficulty in walking, which is very much frustrating and embracing to the patient. allopathic system of medicine has got an important role to play in overcoming agony of pain, restricted movement and disability caused by the articular diseases. Simultaneously, prolonged use of allopathic medicines are not only giving rise to many side effects, toxic symptoms and adverse reactions but also more serious complications like organic lesions etc. are caused by them. Hence the management of this disease is merely insufficient in other systems of medicine and patients are continuously looking with a hope towards

*Ayurveda* to overcome this challenge. *Dashamuladi Kawtha* as *shamana* therapy is mentioned in *Chakradutta* as a good remedy for *Gridhrasi*<sup>3</sup>.

## AIMS & OBJECTIVES

1. To evaluate clinical efficacy of *Dashmuladi Kwatha* in *Gridhrasi* using scientific parameters.
2. To study the aetiopathogenesis of *Gridhrasi* in the light of both ayurvedic and modern perspective.
3. To study the involvement of *doshas* in *Gridhrasi* and to estimate the relative percentage of *vataj* and *vatakaphaj* types of *Gridhrasi*
4. To study the influence of modern life style on *Gridhrasi*.
5. To evaluate the mode of action of *Dashamuladi Kwatha* in the management of *Gridhrasi*.

## MATERIALS AND METHODS

### RESEARCH DESIGN

Present study was carried out in two parts

- a) Conceptual contrive
- b) Clinical contrive

In Conceptual contrive, a detailed study of classical texts of *Ayurveda*, literature of Modern Medicine and various research



works conducted, was carried out in order to establish aetiopathogenesis of *Gridhrasi*.

Clinical contrive was conducted under following sections

### SELECTION OF PATIENT

The present study was designed to be open trial with single group study.

This trial was conducted with ethical clearance obtained from the Institutional Ethics Committee of R.A.Podar Ayurved college Worli, Mumbai Ref no is IEC/2153 dated 24/03/2009. Total 30 patients were selected randomly from OPD and IPD of R A Podar Ayurved College Worli.

### INCLUSION CRITERIA

1. Sex - Both sex Male and Female
2. Age - between 18 yrs to 60 yrs
3. Presence of *ruk, toda, stambha, graha* and *spandana* in the *sphika, kati, uru, janu, jangha* and *pada*.
4. Tenderness along the course of the Sciatic Nerve

### EXCLUSION CRITERIA

1. Patients not willing for trial
2. below 18 yrs and above 60 yrs
3. Pregnant and breast feeding woman
4. Fracture of vertebrae
5. Deformities and congenital defects of spine
6. Patient suffering from DM, tuberculosis, malignancy, Paralysis

### INVESTIGATION CRITERIA

For the purpose of examining the general condition of the patient and to exclude other pathologies the following investigations will be carried out.

1. HB %  
Total WBC  
DLC  
ESR
2. Blood sugar level (Random)
3. X- Ray of Lumbosacral region (AP and Lateral view) and other radiological assessment will be carried out where necessary.

### DRUG - *Dashamuladi kwatha*

Contents : *Dashamul, Bala, Rasna, Guduchi, Sunthi*

Each drug taken in equal proportion  
*Eranda tail* – 5 ml

**DOSAGE:** 40 ml. twice a day.

**DURATION:** 6 Weeks

Morning – 40 ml {Daily}

Evening – 40 ml

**BHAISAJYA KAL:** *Apankal* (before meal)

**MODE OF ADMINISTRATION:** Oral

### STANDARDIZATION OF DRUG:

Chemical analysis of drug was done from recognized Pharmacy.

**DIET:** Regular

### METHOD OF PREPARATION OF DASHAMULADI KWATHA:



The above said available drugs of *Dashmuladi Kwatha* were taken in equal parts. Then coarse powders were prepared from them. After that 16 parts of water was added to the mixed powder of *dravyas* as all these are *Kathina dravyas* as described in *Saharangdhar samhita* and reduced to 1/8<sup>th</sup> part of boiling<sup>4</sup>. Thus *Dashmuladi Kwatha* was prepared.

**FOLLOW UP:** Taken every week for six weeks. All the patients under the treatment were followed and the developments and progress with regards to signs and symptoms was compared, assessed and recorded by using scientific parameters.

#### CRITERIA FOR ASSESSMENT:

This study was assessed on basis of subjective as well as objective criteria. Most of the symptoms and signs of *Gridhrasi* described in ayurveda are subjective in nature. Hence multidimensional scoring system was adapted for statistical analysis and to give results on subjective parameters. Score was given according to the severity of symptoms as follow:

#### SUBJECTIVE CRITERIA

1. *Stambha* (Stiffness)
2. *Ruk* (Excruciating Pain)
3. *Tod* (Pricking pain )
4. *Graha* (difficulty in flexion and extension)

5. *Sparshasahatva* (Tenderness)

6. Difficulty in walking

#### OBJECTIVE CRITERIA

1. SLR (Straight leg raising test)<sup>5</sup>.
2. ODI (Oswestry Disability Index)<sup>6</sup>.

#### TOTAL EFFECT OF THERAPY:

*Uttam Upashaya* - > 75 %

*Madhyam Upashaya* - 51 % – 75 %

*Alpa Upashaya* - 25% - 50 %

*Anupshaya* - < 25%

#### DISCUSSION

- 15 patients [50%] were from the age group of 41-50 yrs. prevalence of sciatica is high in young and middle aged people, which is supported by the findings of the present study. (Table 1.1)

**Table 1.1** Distribution of the patients by age

AGE	NO.OF PATIENTS	PERCENTAGE
18-20	00	00%
21-30	03	10%
31-40	09	30%
41-50	15	50%
51-60	03	10%

- Highest incidence was observed in female. (Table 1.2)

**Table 1.2** Distribution of the patients by sex

SEX	NO.OF PATIENTS	PERCENTAGE
Male	14	46.66%
Female	16	53.34%

- The religion doesn't seem to have any significant relationship with the disease *Gridhrasi*. (table 1.3)

**Table 1.3** Distribution of the patients by religion

RELIGION	NO.OF. PATIENTS	PERCENTAGE
Hindu	23	76.67%
Muslim	06	20.00%
Christian	01	03.33%
Others	00	00.00%

**Table 1.4** Distribution of the patients by marital status

MARITAL STATUS	NO.OF PATIENTS	PERCENTAGE
Married	27	90.00%
Unmarried	03	10.00%

- Maximum patients were from primary education standard.(Table 1.5)

**Table 1.5** Distribution of the patients by education status

EDUCATION STATUS	NO.OF PATIENTS	%
Illiterate	04	13.33%
Primary education	13	43.34%
Secondary education	08	26.67%
Graduate	04	13.33%
Post graduate	01	03.33%

**Table 1.6** Distribution of the patients by food habits

FOOD HABITS	NO.OF PATIENTS	PERCENTAGE
Vegetarians	13	43.33%
Mixed	17	56.67%

**Table 1.7** Distribution of the patients by socio-economic status

SOCIO-ECONOMIC STATUS	NO.OF PATIENTS	PERCENTAGE
Poor	02	06.67%
Lower middle	16	53.33%
Middle	11	36.67%
Rich	01	03.33%

- Maximum i.e. 53.33% patients belonged to lower middle class.(Table 1.7 )

**Table 1.8** Distribution of the patients by occupation status

OCCUPATION	NO.OF.PATIENTS	PERCENTAGE
Household	18	60.00%
Labour	07	23.34%
Service	03	10.00%
Business	01	03.33%
Other	01	03.33%

• Study suggests that physical workers or labour have relatively high prevalence of sciatica because they have to sustain higher load on their spine.(Table 1.8 )

- The addiction is said to be cause of *Mandagni* and *Dhatukshya* which leads to *vataprakopa* and deranged immunity. (Table 1.9)

**Table 1.9** Distribution of the patients by addiction wise

ADDICTION	NO.OF PATIENTS	%
Smoking	02	06.66%
Alcohol	05	16.67%
Tobacco	05	16.67%
No habits	18	60.00%

- Maximum no. of patients of this study showed chronicity of *Gridhrasi* below 1 year (56.67%). Observation may reflect the acute nature of the disease. The data also given clue that the disease may aggravate within a very short time period. (Table 2.0)

**Table 2.0** Distribution of the patients by chronicity

CHRONICITY ( YEARS )	NO.OF PATIENTS	%
Below 1 year	17	56.67%
1 to 3 years	11	36.67%
Above 4 years	02	06.66%

- *Vishamagni* was the root cause for *vataprakopa*. *Mandagni* produces *amarasa* that leads to *srotorodha* and ultimately *vataprakopa* occurs with this process they produce *Gridhrasi*.

- Study suggested that psychological factors play an important role in low back pain. The patients having *AvaraSatva* are



said to be more prone to mental stress. It reveals that the patients were affected by stress, anxiety etc. which have adverse effect on digestive system which plays an important role in *samprapti* of *Gridhrasi*.

- In this study, maximum number of patients i.e., 63.33% patients were having *Vata-Kaphaja* type of *Gridhrasi* whereas 36.67% patients were having *Vataja* type of *Gridhrasi*. This shows the association of *Kapha* with *Vata* in many patients. (Table 2.1)

**Table 2.1** Distribution of the patients by Type of Diseases

TYPE OF DISEASE	NO.OF PATIENTS	%
<i>Vataja</i>	11	36.67%
<i>Vata-Kaphaja</i>	19	63.33%

- Study suggested that occurrence of *Gridhrasi* generally in unilateral leg.

- Maximum number of Patients were having *Krura kostha* thus most of the patient found to be constipated.

- The chance of occurrence of *Gridhrasi* expected to be increasing in future era.

- It was observed that all the patients from the study group have severe disability (Average 44.6 %). After the treatment period of 6 weeks it was seen that the average percentage disability was 34.4 %.

Thus *Dashamuladi Kwathashows* improvement in ODI Index. (table 2.7)

- Out of 30 patients, 9 patients had *MadhyamUpashaya*, 9 had *AlpaUpashaya*, 5 had *UttamUpashaya* & 7 Patients had *Anupshaya*. (table 2.5)

**Table 2.2** Distribution of the patients according to symptom

SYMPTOMS	NO. OF.PATIENTS	%
<i>Stambha</i>	24	80.00%
<i>Toda</i>	30	100%
<i>Ruk</i>	30	100%
<i>Graha</i>	19	63.33%
<i>MuhuSpandana</i>	14	46.67%
<i>DehasyaPravakranta</i>	09	30.00%
<i>Suptata</i>	13	43.33%
<i>Tandra</i>	12	40.00%
<i>Gaurava</i>	15	50.00%
<i>Arochaka</i>	18	60.00%
<i>Bhaktadvesha</i>	14	46.67%
<i>Agniamandya</i>	18	60.00%
<i>Kati-Uru-Jaanu</i>	16	53.33%
<i>MadhyeBahavedana</i>		

**Table 2.3** Percentage of *Upashay – Anupashaya* on General Symptoms Score of Patients of *Gridhrasi*

Sr. No.	Symptoms	BT	AT	Diff	Percentage of Upashay
1.	<i>Stambha</i>	60	39	21	35.00%
2.	<i>Ruk</i>	56	29	27	48.21%
3.	<i>Tod</i>	53	27	26	49.05%
4.	<i>Graha</i>	52	32	20	38.46%
5.	<i>Sparshasahatva</i>	43	24	19	44.18%
6.	<i>Difficulty in walking</i>	45	31	14	31.11%

- There was no significant change noted in value of Haemoglobin, whereas significant changes noted in value of ESR.

**Table 2.4** Percentage of *Upashaya – Anupashaya* on SLR test: % Wise Upashay

Sr. No.	Symptoms	BT	AT	Diff	Percentage of Upashay
1.	SLR	50	32	18	36%

- From the statistical analysis it can be concluded that though the results were significant in all the parameters (table 2.7),





the % wise *Upashaya* obtained was ranging from 30% to 50% approximately.

**Table 2.5** Percentage of Relief

UPASHAY-ANUPSHAY	NO. OF PATINETS
<i>UttamUpashay</i> (>75%)	5
<i>MadhyamUpashay</i> (51%-75%)	9
<i>AlpaUpashay</i> (25%-50%)	9
<i>Anupshay</i> (<25%)	7

**Table 2.6** Percentage of *Upashaya - Anupashya* on % Disability according to ODI Index

Sr No	ODI	BT	AT	Differences	% Upashaya
1	% Disability	1338	1032	306	22.86%

**Table 2.7** Statistical Table

Sr No	Symptoms	Mean	SD	SE	W	N	Z	P	
1	<i>Stambha</i>	BT	2.0	0.787	0.144	231	21	4.015	<0.01 Significant
		AT	1.3	0.988	0.180				
		DIF	0.7	0.180	0.08				
2	<i>Ruk</i>	BT	1.87	0.73	0.13	351	26	4.41	<0.01 Significant
		AT	0.97	0.809	0.148				
		DIF	0.9	0.403	0.070				
3	<i>Tod</i>	BT	1.77	0.817	0.149	253	22	4.10	<0.01 Significant
		AT	0.9	1.06	0.194				
		DIF	0.867	0.629	0.115				
4	<i>Graha</i>	BT	1.733	0.907	0.166	210	20	3.92	<0.01 Significant
		AT	1.067	0.908	0.179				
		DIF	0.667	0.479	0.087				
5	<i>Sparshasahatva</i>	BT	1.433	0.679	0.124	190	19	3.82	<0.01 Significant
		AT	0.8	0.847	0.155				
		DIF	0.633	0.490	0.089				
6	Difficulty in Walking	BT	1.5	0.038	0.171	105	14	3.29	<0.01 Significant
		AT	1.033	0.064	0.176				
		DIF	0.467	0.507	0.093				
7	SLR TEST	BT	1.67	0.758	0.138	151	18	3.29	<0.01 Significant
		AT	1.07	1.01	0.185				
		DIF	0.60	0.498	0.097				
8	ODI	BT	44.60	3.80	0.69	465	30	18.99	<0.01 Significant
		AT	34.40	2.06	0.37				
		DIF	10.20	2.94	0.53				

- *DashamuladiKwatha* chosen for the study were having *UshnaVirya*, *Deepana* and *Kapha-VataShamaka* properties. So by their virtue, they help in dissolving the *Samprapti of Gridhrasi*.
- All the drugs were having anti-inflammatory and analgesic properties as

well. Therefore helps in relieving the pain and inflammation of nerve, if any

- Present study reveals that the selected management have potential effect on *Gridhrasi* with the added advantage of being free from side effects.





## CONCLUSION

*Dashmuladi Kwatha* is definitely helpful in the treatment of *Gridhrasi*. It is easily available and can be consumed easily. It is also cost effective. Study concluded that as the chronicity of disease increases, the effect of the study drug decreases. Study drug is effective only in acute state of disease. Addition of supplementary treatment either in the form of *Panchkarma* or addition of *Rasa kalpa* may help in relieving the symptoms. These results of *Dashmuladi Kwatha* are encouraging and further research is necessary.



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