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ABSTRACT

Due to sedentary life style, more and more population is falling to many “*Vatika* disorders” affecting the loco motor system. “*Gridhrasi*” which is enumerated among the “*Nanatmaja Vyadhi of Vata*” in the classics, is high on list. As far as etiopathology of *Gridhrasi* is concerned ‘*Vatavaigunya*’ plays an important role. It essentially plays a role in the over stimulation of the nerve as experienced by severe pain in the course of affected part. Many works on *Basti* in *Gridhrasi* have been tried but *Basti* on *Chaturbhadra Kalpa* pattern much research has not been done. So to assess the efficacy of *Chaturbhadra kalpa basti krama* the present study was undertaken. The assessment criteria were noted before treatment and after follow up. Subjective parameters were, *Stambha*, *Ruk*, *Toda*, *Supthi* in *sphik*, *kati*, *prushta*, *uru*, *janu*, *jangha* and *pada* and Objective parameters were, Straight Leg Raising [SLR] test, Visual Analog Scale (VAS), E.S.R. In present study 80 % patient were best responded.

Keywords: *Gridhrasi*, *Chaturbhadra kalpa basti krama*, *Ardhamatric nirooha basti*.

INTRODUCTION: *Vatavyadhis* are *kashtasadhya*, they require early and proper line of management. In this way *shodhana* plays major role. Among the *shodhana karmas* *Bastikarma* is considered as the most important one due to its wide spread application and effect. It stands unique because it expels the vitiated *doshas* rapidly and easily from body. Thus bringing the *vata* to normalcy and overcoming the *samprapti*. It is considered as the prime therapy for the *Vata pradhana vyadhis*¹. *Ardhamatrika Basti* is mentioned in *Cakradatta* as *Tridoshahara*.²

There are different patterns explained like *Yoga Basti*, *Kala Basti*, *Karma Basti*³ and different research works have been carried out on this three pattern but regarding *chaturbhadra kalpa* much research has not been done. *Chaturbhadra kalpa* is the pattern of giving *Basti*, which is explained in *Kashyapa samhita* and mention as *Niratyaya*.⁴ In *chaturbhadra kalpa* pattern first 4 days continuous *Anuvasana Basti*

then 4 days continuous *Nirooha Basti* and in last again 4 days continuous *Anuvasana Basti* is given. According to *Sharangadhara* it is mentioned that first *Utkleshana* then *Doshahara* and in last *Samshamaneeya basti* should be given⁵, in this way we can understand *Chaturbhadra kalpa basti krama*, as first 4 *Anuvasana* may act as *utkleshana Basti* next 4 *Nirooha Basti* may act as *Doshahara Basti* and last 4 *Anuvasana Basti* may act as *Samshamaneeya Basti* in *Vatakaphaja* type of *Gridhrasi*. In *Vataja Gridhrasi* *Anuvasana Basti* may act as *Bramhana*, *Vatashamana* and *Nirooha Basti* may act as *Shodhana*.

In *Chaturbhadra kalpa basti krama* first 4 *Anuvasana Basti* does *utkleshana* of *dosha*, next 4 *Nirooha Basti* does *shodhana* of *utkleshita dosha*, last 4 *Anuvasana Basti* does *shamana* of remaining *dosha*. The *Adhishtana* of disease *Gridhrasi* is *Kati Pradesh* which is the predominant site of *Vata Dosha*, so

Dosha Pratyaniika Chikitsa is likely to be effective. In this regard the objectives proposed in the study are evaluate the efficacy of *Chaturbhadrā kalpa basti* in the management of *Gridhrasi*.

MATERIALS AND METHODS:

Sample size: 10 patients received *Ardhamatrika nirooha basti* and *sahachara taila anuvasana* *basti* in *chaturbhadrā kalpa basti krama*.

Selection Criteria: The cases were selected strictly as per the pre-set inclusion and exclusion criteria.

Inclusion Criteria:

1. Pain along the course of Sciatic Nerve (*Gridhrasi nadi*)
2. Straight leg raising (SLR) test being positive.
3. Presence of clinical features of both *vataja* and *vata Kaphaja Gridrasi* i.e *Ruk, Stamba, Toda* etc.
4. No discrimination of sex.
5. Age group between 20 to 60 years.
6. Patients fit for *Bastikarma*

Exclusion Criteria:

1. Age group below 20 and above 60 years
2. Infective disorders
3. Degenerative disorders with marked deformity.
4. History of trauma
5. Long standing calcified patients.
6. Patient with other severe systemic and metabolic disorders like Diabetes Mellitus, Hyperthyroidism, Cardiac disease etc.
7. Pregnant women and lactating mothers.

Study duration:

Chaturbhadrā kalpa basti krama - 12 days
Pariharakala - 24 days
Total study duration - 36 days.

Subjective parameters:

- 1) *Stambha* of affected *sakthi*.
- 2) *Ruja* in *sphik, kati, prushta, uru, janu, jangha* and *pada*.
- 3) *Toda* in *kati, prushta, uru, janu, jangha* and *pada*.
- 4) *Supthi* in *sphik, kati, prushta, uru, janu, jangha* and *pada*.

Objective parameters:

- 1) Straight Leg Raising [SLR] test.
- 2) Visual Analog Scale (VAS)

Investigations: For Diagnostic purpose

- 1) Hb%.
- 2) T.C, D.C.
- 3) RBS
- 4) Plain X-rays of lumbar spine for Diagnostic & Assessment of Results
- 5) E.S.R

CHIKITSA:

The Materials Used for the Study:

- a) *Dashamoola kashaya* - 400 ml
- b) *Shatahva kalka* - 10 grams
- c) *Saindhava* - 10 grams
- d) *Madhu* - 100 ml
- e) *Murchita TilaTaila* - 100 ml

***Sahachara taila*⁶**

Sahachara Kashaya, Sahachara MoolaKalka, Tila taila, Ksheera and *Sharkara* are the five ingredients are added and reduced according to *taila paka vidhi*.

***Chaturbhadrā kalpa basti krama*⁷**

First *Anuvasana basti* 4 days continue then *Nirooha basti* 4 days continue and in last again 4 days continue *Anuvasana basti* is given.

Poorvakarma: All the patients were asked to be in the hospital with in 9.A.M. Every patient was given *stanika abhyanga* and *swedana* just prior to the introduction of *bastidravya*. The *abhyanga* was done with *Sahachara taila* to the *udarapradesha, kati, prushta, ooru, janu, jangha* and *pada*.

Swedana was done only on to the area where the *abhyanga* was done.

Pradhanakarma: *Ardhamatrika nirooha basti* was administered to all patients by using plastic enema pot fit with soft rubber tubes at the terminal end and for *Anuvasana Basti* Glycerine syringe fit with soft rubber tube was used. For *Nirooha* a quantity of 600 ml. luke warm *bastidravya* and for *Anuvasana* 100 ml of *Sahachara taila* was taken in the *bastiyatra* and air is trapped from *bastiyatra*. Then the anal region and the *netra* is smeared with oil. Gently rubber catheter was introduced in to the anal orifice up to the four *Angula* length. The method of administration of *bastidravya* was strictly followed as told by the *Acharyas*.

After the *Anuvasana basti*, the patient was made to lie on supine posture and gentle tapping was made on each of the soles and over the buttocks, legs of the patient was raised thrice. After passing the motion with *sneha* in proper time the patient is allowed to take light food in the evening if he feels hungry.

After the *nirooha Basti*, Patient was asked to remain in the same position till the feeling of defecation. Later after the manifestation of urges he was asked to evacuate the *bastidravya*. After the limited time, 1/2hr-1hr time, patient was asked to take hot water bath and was advised with *laghu bhojana*.

The same procedure was repeated for 12 days. The time of administration, the time of retention and complication was noticed if any.

Paschatkarma: *Basti pratyagamana kala* was recorded and then thorough examination of the patient was repeated by noting all the vital data again. Patient

was advised with all the *pathyapathyā* to be maintained in the *basti pariharakala*.

The patient was asked to follow a *pariharakala* of 24 days and was asked to report on 36th day from the treatment schedule started, for follow up and observation.

Assessment of Response to Treatment: For subjective analysis gradation of cardinal symptoms are the Parameters. For objective analysis SLR test, VAS and ESR are the parameters. Every patient was observed before treatment and after the follow up for clinical response. The result is analyzed as below.

1. Best responded: Total absence of cardinal symptoms, SLR test being negative, VAS up to 3, ESR up to 10 mm/1st hour.

2. Responded: Up to 80% absence of cardinal symptoms, SLR test being negative or maximum improvement, VAS up to 6, ESR between 11-15 mm/1st hour

3. Not responded: No change in cardinal symptoms, SLR test being negative or same or minimum improvement, VAS more than 6, ESR more than 15 mm/1st hour. Certain gradations and declarations are made about the data, which are as follows,

Gradings of Subjective parameter:

Ruk (pain): Grade 0 - No pain.

Grade 1 - Trivial pain.

Grade 2 - Mild pain.

Grade 3 - Moderate pain.

Grade 4 - Severe pain.

Sthamba (Stiffness):

Grade 0 - No stiffness.

Grade 1 - Up to 25% impairment of movements.

Grade 2 - 25-50% impairment of movements.

Grade 3 - 50-75% impairment of movements.

Grade 4 - More than 75% impairment movements.

Toda: Pricking sensation

Grade 0 – Absent. Grade 1 – Present.

Tingling sensation Grade 0 – Absent.

Grade 1 – Present.

Burning sensation Grade 0 – Absent.

Grade 1 – Present.

Suptata: Grade 0 – Absent.

Grade 1 – Present.

Gradings of Objective parametere.

Straight Leg Raising Test:

Grade 0 - More than 90°

Grade 1 - 71°-90°

Grade 2 - 51°-70°

Grade 3 - 31°-50°

Grade 4 - up to 30°

Visual Analogue Scale (VAS):

Grade 0 - 0

Grade 1 - 1-3.

Grade 2 - 4-6

Grade 3 - 7-10

Erythrocyte Sedimentation Rate(E.S.R.)

Grade0- 0 to 10 mm/1st hour

Grade1- 11-15 mm/1st hour

Grade2- 16-20 mm/1st hour

Grade3- 21-25 mm/1st hour

Grade4- more than 25 mm/1st hour.

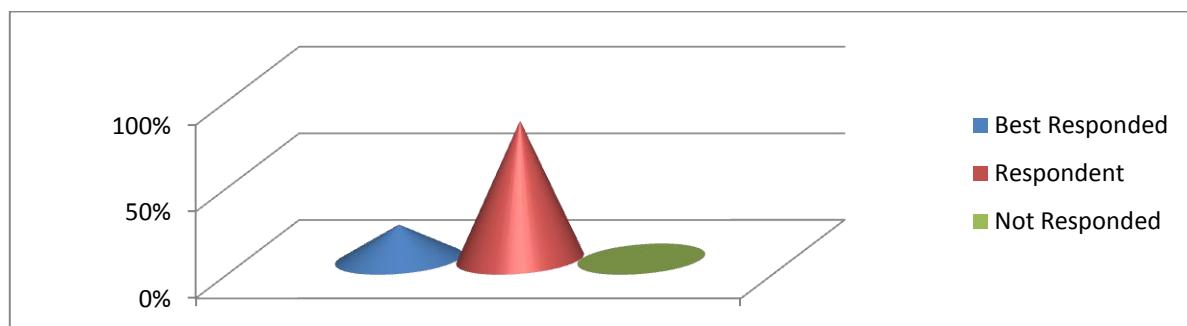


OBSERVATIONS AND RESULTS:

Showing Statistical Outcome of the study Before Treatment & After Follow up

Showing the Overall Assessment:

Parameter	Mean		Net Mean	%	SD	SE	T-value	P-value	Remarks
	BT	AF							
<i>Sthambha</i>	2.4	0.4	2	83.33	2.1	0.664	3.009	<0.02	HS
<i>Ruk</i>	3.7	1.1	2.6	70.27	2.66	0.841	3.088	<0.02	HS
<i>Toda</i> (pricking sensation)	0.5	0	0.5	100	0.55	0.714	2.872	<0.02	HS
<i>Toda</i> (tingling sensation)	0.3	0	0.3	100	0.23	0.072	4.121	<0.001	HS
<i>Toda</i> (burning sensation)	0	0	0	0	0	0	-	-	-
<i>Suptata</i>	0.5	0	0.5	100	0.45	0.142	3.511	<0.01	HS
SLR active right leg	2	1	1	50	1.1	0.348	2.872	<0.02	HS
SLR active left leg	2.1	1.1	1.2	57.14	1.12	0.354	3.385	<0.01	HS
SLR passive right leg	2	1	1	50	1.1	0.348	2.872	<0.02	HS
SLR passive left leg	2.3	1	1.3	56.52	1.23	0.389	3.339	<0.01	HS
VAS	2.9	1.1	1.8	62.06	1.78	0.563	3.195	<0.02	HS
E.S.R.	0.8	0.1	0.7	87.5	0.77	0.243	2.872	<0.02	HS
Treatment effect						No.		%	
Best Responded						2		20%	
Respondent						8		80%	
Not Responded						0		0%	



DISCUSSION ON CHATURBHADRA KALPA BASTI KRAMA: *Chaturbhadra kalpa* is the pattern of giving *Basti*, which is explained in *Kashyapa samhita* and mention as *niratyaya*. In *chaturbhadra kalpa* pattern first 4 days continuous *Anuvasana Basti* than 4 days continuous *Nirooha Basti* and in last again 4 days continuous *Anuvasana Basti* is given.

According to *Sharangadhara* it is mention that first *Utkleshana* than *Doshahara* and in last *Samshamaneeya basti* should be given⁸, in this way we can understand *Chaturbhadra kalpa basti krama*, as first 4 *Anuvasana* may act as *utkleshana Basti* next 4 *Nirooha Basti* may act as *Doshahara Basti* and last 4 *Anuvasana Basti* may act as *Samshamaneeya Basti* in

Vatakaphaja type of *Gridhrasi*. In *Vataja Gridhrasi Anuvasana Basti* may act as *Bramhana*, *Vatashamana* and *Nirooha Basti* may act as *shodhana*.

RESULTS:

- In overall assessment of the study, among 10 patients, 20 %(2 patients) showed best response and 80% (08 Patients) showed response.
- *Sthambha*, *Ruk*, *VAS* are better responded.
- *Chaturbhadrā kalpa basti krama* with *Ardhamatrika Nirooha Basti* and *Sahachara taila Anuvasana basti* is an effective treatment in the management of *Gridhrasi* and it shows long lasting result.

CONCLUSION: At the end of the study, following conclusions can be drawn on the basis of observations made, results achieved and thorough discussions in the present context. *Gridhrasi* occurs due to provoked *vata* and seated in the *kandaras* of the lower extremities. Impairment of *Utshepanadi karma* is the main features along with *ruk*, *sthabdatha* and *toda* etc.

The symptomatology of *Gridhrasi* explained in the classics are having the resemblance to the symptomatology of *Sciatica* explained in contemporary science. The main cause of *Sciatica*, degenerative changes in the lumbar vertebrae can be compared with the *Dhatukshayaja nidana* of *Gridhrasi*.

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Source of support: Nil Conflict of interest:

None: Declared

Cite this Article as: Ladhav Manish: Evaluation of the Efficacy of Chaturbhadrā Kalpa Basti Krama in the Management of Gridhrasi w.s.r. to. Sciatica, IJAAR VOLUME III ISSUE III JUL-AUG 2017, Page:623-628