

A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF DHANYAKADI GHANA VATI WITH USHANA JALA & TAKRA IN THE MANAGEMENT OF GRAHANI ROGA

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ABSTRACT

Grahani is one among the “*Ashta Maha Roga*” mentioned in Classics. It's the vital sickness of *Annavaha Srotas*. And seen in day to day apply. It had been delineated as a chronic sickness that produces because of the weakness of *Agni* and its four types *Vata*, *Pittaja*, *Kaphaja* and *Tridoshaja*. Patient passes stool as liquid, dried, skinny & undigested with sound, broken, mixed with secretion and significant, frequent motions. That are of typically, dry & watery consistency is that the cardinal symptoms. The symptoms of *Grahani Dosha* as mentioned in classics are like the disease referred to as Irritable bowel Syndrome. The present study was carried out with an objective to find an alternative, reliable, safe and cost-effective treatment for *Grahani Roga* and to study the etiopathogenesis of *Grahani Roga*. The study was “Single blind study” conducted on 40 patients of *Grahani Roga* of either sex. Patients were randomly recruited to two Groups (20 each). Patients were subjected through an *Ayurvedic* formulation prepared in the form of *Vati* with *Takra* and *Ushana Jala* as *Anupana* ingredients as *Dhanyaka*, *Bilwa*, *Shunthi*, *Ativisha*, *Musta*, *Bala*, *Ajmoda*, *Sugandhbala*, *Mudagparni*, *Mashparni*.

Keywords: *Grahani Roga*, *Dhanyakadi Ghana Vati*, *Takra*, *Ushana Jala*, *Astamaha-Gada*

INTRODUCTION

In current era faulty dietary habits, sedentary lifestyle and stress are key causative factors for diseases. All these causes disturbed in the function of digestion and absorption leading many digestive disorders. *Grahani* is one of the digestive disorders. According to *Acharya Sushruta*,

Atisara is considered as one of the predisposing factors for ‘*Grahani Roga*’ *Acharya Vagbhata* describes that *Arsha*, *Atisara* and *Grahani Vikara* are ‘*Anyonya Nidana Bhuta Vyadhi*’, where *Agni Vikriti (Agniman-*

dya) is root cause for the disease. *Grahani* is described as an *Agni Adhithana* by almost all *Acharyas* and commentators. “रोगाः सर्वेऽपि मंदेऽग्नौ” (अ.ह.नि.12/1)

Grahani Roga described in classical text of *Ayurveda* represents a group of disorders in modern science. Malabsorption, tropical sprue, IBS, ulcerative colitis, amoebiasis mentioned in modern medicine may be considered under *Grahani Roga*. It is fact that normal state of *Agni* is dependent on healthy diet, lifestyle and blissful state of mind. Hence it is pertinent that

our drug should be such which enhances *Agni*, breaks the pathogenesis of the disease, neutralizes and eliminates the morbid toxic material and endows the tranquility of mind. Contemplating all the above-mentioned factors we have selected *Dhanyakadi Ghana Vati* to manage *Grahani Roga* under the title “A comparative clinical study to evaluate the efficacy of *Dhanyakadi Ghana Vati* with *Ushana Jala & Takra* in the management of *Grahani Roga*.”

Aim and Objectives

- To study the aetiopathogenesis of *Grahani Roga* on the basis of *Ayurvedic* parameters.
- To study the effect of *Ayurvedic* formulation in the management of *Grahani Roga*
- To provide the reliable, cost effective *Ayurvedic* treatment for *Grahani Roga*.

Material and Methods:

- 40 **Patients** of *Grahani Roga* were selected from the O.P.D. / I.P.D. department of Kayachikitsa, Rishikul Campus, and Haridwar.
- **Ethical clearance-** The research has been approved by the Institutional Ethical Committee. Written consent was taken from all the subjects before the trial and study was in accordance with ICH GCP Guidelines.

CTRI Number: CTRI/2019/02/017701 [Registered on: 18/02/2019] Trial Registered Prospectively.

- **Selection of Sample:** - Randomized Sampling
- **Type of Study:** Single Blind
- **Duration of Study:** 45 days
- **Selection of Drug:** *Dhanyakadi Ghana Vati*
- **Dose of Drug:** 1gm TDS

Drug Trial Schedule:

- The selected patients for trial were randomly divided into following 2 groups having 20 patients in each group.

Group I - 20 Patients were treated with *Dhanyakadi Ghana Vati* with *Anupana* of *Takra*.

Group II - 20 Patients were treated with *Dhanyakadi Ghana Vati* with *Anupana* of *Ushana Jala*

Inclusion Criteria:

- Patients between 18-60 years of age group.
- Patients having symptoms of *Grahani* viz. *Muhurbaddha-Muhurdrava Mala Pravritti*, *Ama-Mala Pravritti*, with or without other *Lakshanas* of *Grahani* like *Trishna*, *Arochaka*, *Ajirna*, *Udara-Gaurava*, *Aalasya*, *Vidaha*, *Vistambha*, *Dourgandhita Mala Pravritti*.

Exclusion Criteria:

- Patients suffering from any other systemic disorders like Hypothyroidism, Hyperthyroidism, Diabetes mellitus, Hypertension, Cardiac disease, renal dysfunction which interferes with the course of the disease and treatment were excluded.
- Life threatening disease like abdominal Koch's, CA colon, and partial abdominal obstruction were excluded.
- Patients with *Upadrava* of *Grahani* like *Gudabramsha*, *Gudapaka*, *Gudashotha* were excluded.
- Patients with features such as severe anaemia, rectal bleeding, and significant weight loss were excluded.

Investigations:

Hb%, T.L.C. E.S.R. Stool – routine and microscopic, ova cyst, SGOT, SGPT, Urine – Routine & Microscopic

These investigations were done in all the patients before and after completion of treatment to rule out any other pathological condition.

Pathy-Apathya

Nutritious, easily digestible and *Sattvika* diet has always been commended. Overeating and consumption of *Rajasika -Tamasika* diet should be avoided.

Assessment of Result:

Effects of the therapies were compared before and after the treatment on the basis of subjective and objective parameters associated with the disease.

Subjective Criteria: The patients with the complaints of *Grahani Roga*, viz. *Muhurbaddham-Muhurdrava Malapravritti*, *Apakva Malapravritti*, *Arochaka*, *Ajirna*, *Udara-Gaurava*, *Aalasya*, *Vidaha*,

Vistambha, Dourgandhita Mala Pravritti. Trishna were selected for the study.

Objective criteria: Frequency of stool, mucus in stool, blood in stool, ova/ cyst in stool were selected for the study

Statistical Analysis

- Wilcoxon Signed Rank Test was applied on the subjective parameters and objective parameters in both the groups.

- The tests were carried at the 0.05, 0.01, 0.001 level of P.
- For inter group comparison of subjective and objective parameters Mann Whitney U Test was used.
- Thus, the obtained result was interpreted as: P>0.05 Not Significant, P<0.01&<0.05 significant, P<0.001 highly significant

Observations & Results

Table 1: Efficacy of ‘Group- I’ on Subjective Parameters

Group I Parameter	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Muhurbaddham / Drava Mala Pravritti	2	0	-3.666 ^a	<0.001	87.10	HS
Apakva Malapravritti	2	0	-3.703 ^a	<0.001	90.91	HS
Dourgandhita Malapravritti	1	0	-4.001 ^a	<0.05	75.00	Sig
Udara Shoola	2	0	-3.906 ^a	<0.001	88.57	HS
Udara Gaurava	1.5	0	-4.065 ^a	<0.05	71.88	Sig
Vistambha	2	0	-3.926 ^a	<0.001	85.29	HS
Aruchi	1	0	-4.359 ^a	<0.05	70.37	Sig
Alasya	2	1	-3.852 ^a	<0.05	62.50	Sig
Vidaha	1.5	0.5	-4.185 ^a	<0.05	67.74	Sig
Ajeerna	2	0	-3.825 ^a	<0.001	87.10	HS

The table shows that statistically highly significant result found in subjective parameters like Muhurbaddham / Drava Mala Pravritti, Apakva Malapravritti, UdaraShoola, Vishtmbha, Ajeerna (p<0.001).

Statistically significant result found in subjective parameters like Dourgandhita Malapravritti, Udara Gaurava, Aruchi, Alasya, Vidaha as value of p< 0.01 in each

Table 2: Efficacy of ‘Group- II’ on Subjective Parameters

Group II Parameter	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Muhurbaddham/ Drava Mala Pravritti	2	1	-4.025 ^a	<0.05	52.94	Sig
Apakva Mala Pravritti	2	1	-3.900 ^a	<0.05	54.84	Sig
Dourgandhita Mala Pravritti	2	1	-4.185 ^a	<0.05	53.85	Sig
Udara shoola	2	1	-3.945 ^a	<0.05	54.29	Sig
Udara Gaurava	2	1	-3.771 ^a	<0.05	50.00	Sig
Vistambha	1	1	-3.606 ^a	<0.05	48.15	Sig
Aruchi	2	1	-3.742 ^a	<0.05	43.75	Sig
Alasya	2	1	-3.606 ^a	<0.05	40.63	Sig
Vidaha	1.5	1	-3.606 ^a	<0.05	43.33	Sig
Ajeerna	2	1	-4.300 ^a	<0.05	57.89	Sig

The table shows that statistically significant result was found in all subjective parameters like Muhurbaddham/ Drava Mala Pravritti, Apakva Mala Pravritti, Dourgandhita Mala Pravritti, Udara shoola, Udara Gaurava, Vistambha, Aruchi, Alasya, Vidaha,

Ajeerna as value of p<0.01 in each. From above table we can observe that P-Values for all parameters are less than 0.05. Hence, we conclude that effect observed is significant.

Table 3: Inter Group Comparison of Subjective Parameters

Subjective parameters	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
<i>Muhurbaddham/ Drava Mala Pravritti</i>	Group I	20	24.28	485.50	124.500	0.024
	Group II	19	16.73	334.50		
	Total	39				
<i>Apakva Mala Pravritti</i>	Group I	20	25.03	500.50	109.500	0.007
	Group II	19	15.98	319.50		
	Total	39				
<i>Dourgandhita-Mala Pravritti</i>	Group I	20	20.53	410.50	199.500	0.985
	Group II	19	20.48	409.50		
	Total	39				
<i>Udara-Shoola</i>	Group I	20	25.63	512.50	97.500	0.002
	Group II	19	15.38	307.50		
	Total	39				
<i>Udara-Gaurava</i>	Group I	20	23.53	470.50	139.500	0.037
	Group II	19	17.48	349.50		
	Total	39				
<i>Vishtmbha</i>	Group I	20	26.10	522.00	88.000	0.001
	Group II	19	14.90	298.00		
	Total	39				
<i>Aruchi</i>	Group I	20	23.00	460.00	150.000	0.040
	Group II	19	18.00	360.00		
	Total	39				
<i>Alasya</i>	Group I	20	25.28	505.50	104.500	0.003
	Group II	19	15.73	314.50		
	Total	39				
<i>Vidaha</i>	Group I	20	24.15	483.00	127.000	0.009
	Group II	19	16.85	337.00		
	Total	39				
<i>Ajeerna</i>	Group I	20	22.65	453.00	157.000	0.148
	Group II	19	18.35	367.00		
	Total	39				

From above table we can observe that P-Values for almost parameters are less than 0.05. Hence, we conclude that there is significant difference between Group I and Group II.

Further we can observe that mean rank for Group I is greater than Group II. Hence, we conclude that effect observed in Group I is more than Group II.

Table 4: Comparative Assessment of % Relief on Various Symptoms

Symptoms	% Effect	
	Group I	Group II
<i>Muhurbaddham/ Drava Mala Pravritti</i>	87.10	52.94
<i>Apakva Mala Pravritti</i>	90.91	54.84
<i>Dourgandhita Mala Pravritti</i>	75.00	53.85
<i>Udara Shoola</i>	88.57	54.29
<i>Udara Gaurava</i>	71.88	50.00
<i>Vistambha</i>	85.29	48.15
<i>Aruchi</i>	70.37	43.75
<i>Alasya</i>	62.50	40.63
<i>Vidaha</i>	67.74	43.33
<i>Ajeerna</i>	87.10	57.89

Table 5: Efficacy of Group I on Objective Parameter

Group I Parameter	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Frequency of Stool	1	0	-3.819 ^a	<0.001	87.20	HS
Mucous in Stool	1	0	-3.742 ^a	<0.001	87.50	HS
Blood in Stool	1	0	-3.606 ^a	<0.001	86.60	HS
Ova Cyst	1	0	-3.742 ^a	<0.001	93.30	HS

The table shows that statistically highly significant result was found in all objective parameters like Frequency of Stool, Mucous in Stool, Blood in Stool, Ova Cyst as value of $p < 0.001$ in each

Table 6: Efficacy of Group II on Objective Parameters

Group II Parameter	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Frequency of Stool	2	1	-4.264 ^a	<0.001	74.50	HS
Mucous in Stool	1	0	-2.646 ^a	<0.001	70.00	HS
Blood in Stool	1	0	-3.742 ^a	<0.001	82.30	HS
Ova Cyst	1	0	-3.000 ^a	<0.001	81.80	HS

The table shows that statistically highly significant result was found in all objective parameters like Frequency of Stool, Mucous in Stool, Blood in Stool, Ova Cyst as value of $p < 0.001$ in each

Table 7: Intergroup Comparison of Objective Parameters

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
Frequency of Stool	Group I	20	19.58	391.50	181.500	0.473
	Group II	19	21.43	428.50		
	Total	39				
Mucous in Stool	Group I	20	24.00	480.00	130.000	0.086
	Group II	19	17.00	340.00		
	Total	39				
Blood in Stool	Group I	20	20.00	400.00	190.000	0.739
	Group II	19	21.00	420.00		
	Total	39				
Ova Cyst	Group I	20	23.00	460.00	150.000	0.114
	Group II	19	18.00	360.00		
	Total	39				

For comparison between Group I and Group II, we have used Mann Whitney U test. From above table we can observe that P-Values for all parameters are greater than 0.05. Hence, we conclude that there is no significant difference between Group I and Group II.

Table 8: Comparative Assessment of % Relief on Various Symptoms

Symptoms	% Effect	
	Group I	Group II
Frequency of Stool	87.20	74.50
Mucous in Stool	87.50	70.00
Blood in Stool	86.60	82.30
Ova Cyst	93.30	81.80

Table 9: Estimation of Overall Response in Each Group

Overall Effect	Group I		Group II	
	Frequency	Percentage	Frequency	Percentage
Complete Improvement	0	0	0	0
Marked Improvement	13	65	0	0
Moderate Improvement	7	35	13	68.4
Mild Improvement	0	0	6	31.5
No Improvement	0	0	0	0
TOTAL	20	100	19	100

Overall response in group I was marked improvement in 65% of patients, moderate improvement in 35% of patients, while group II showed moderate improvement in 68.4% of patients and mild improvement in 31.5% of patients in *Grahani Roga*.

In comparative assessment of results in two groups, about symptomatic relief in subjective parameters it is found that maximum relief in sign and symptoms is found in group I

DISCUSSION

Group I - Dhanyakadi Ghana Vati With Takra Statistically highly significant result was found in subjective parameters like *Muhurbaddham Muhurdrava Malapravritti, Apakva Malapravritti, Udara Shoola, Ajeerna and Vistambha*. Statistically significant result was found in subjective parameters like *Dourgandhita Malapravritti, Udara Gaurava, Aruchi, Vidaha and Alasya*. Statistically highly significant result was found in all objective parameters like Frequency of Stool, Mucous in Stool, Blood in Stool, Ova Cyst. In Group II (*Dhanyakadi Ghana Vati with Ushana Jala*) Statistically significant result was found in all subjective parameters like *Muhurbaddham/ Drava Mala Pravritti, Apakva Mala Pravritti, Dourgandhita Mala Pravritti, Udara shoola, Udara Gaurava, Vistambha, Aruchi, Alasya, Vidaha, Ajeerna*. Statistically highly significant result was found in all objective parameters like Frequency of Stool, Mucous in Stool, Blood in Stool, Ova Cyst.

Inter Group Comparison On comparative assessment of % relief in Subjective Parameters it was found that patients got better relief in Group I than the Group II in majority of symptoms namely *Muhurbaddham Muhurdrava Malapravritti (87.10%),*

Apakva Malapravritti (90.91%), and Dourgandhita Malapravritti (75.00), Udara Gaurava (71.88%), Aruchi (70.37%), and Alasya (62.50%). On inter group comparison by Mann Whitney U Test it was found that group I was more statistically Significant than the group II. Intergroup comparison of objective parameters using Mann Whitney U Test shows that there is no significant difference between Group I and Group II. Thus, it can be concluded that statistically and on the basis of percentage relief the overall effect of group I was best followed by Group II.

Probable Mode of Action of Drug: Dhanyakadi Ghana Vati –

A trial drug *Dhanyakadi Ghana Vati* described by Acharya Chakrapani in *Chakradatta* in *Grahani Chikitsa Adhyaya* is an herbal preparation. It has 10 contents namely *Dhanyaka, Bilva, Shunthi, Ativisha, Musta, Bala, Ajmoda, Sugandhbala, Mudagparni, and Mashparni*. All the contents of *Dhanyakadi Ghana Vati* have anti-inflammatory, anti-diarrheal, antispasmodic, antioxidant, and analgesic activity, regulates gut motility and immunomodulatory effect. As a whole the combined action of *Dhanyakadi Ghana Vati* can be summarized as *Vata-Pitta-Kapha Shamaka, Grahi, Agnideepana, and Aampachanka*. Thus, the drug was effective in breaking the pathogenesis of *Grahani Roga*. In *Dhanyakadi Ghana Vati* most of the ingredients have *Kashya, Tikta Rasa, Katu Vipaka, and Ushana Virya* and *Deepana, Pachana, and Grahi* properties. All the contents of *Dhanyakadi Ghana Vati* are having *Tridosha-Shamaka* properties.

CONCLUSION

Ama is the root cause of almost all diseases produced in the body. So, the treatment of any disease can be based on *Sama* and *Nirama Avastha*. When the vitiated *Doshas* get confined to only the organ *Grahani* (i.e. functional derangement), then could be called *Grahani Dosh*. When the vitiated *Doshas* travel throughout the *Rasadi Dhatus* i.e. *Sarvasharira Gatatva* (may be structural derangement) then it could be called as *Grahani Roga*. A single disease entity cannot be correlated with *Grahani* as per modern science, even though Malabsorption syndrome is more similar. Chronic colitis, tropical sprue, IBS, etc also can be included. Improper dietary habits and stressful lifestyle of modern era are the root causes for *Agni Dushti* and subsequently *Grahani* disease. On the basis of all results obtained in the study it can be concluded that *Dhanyakadi Ghana Vati* with *Takra* works more effectively on chief symptoms of *Grahani Roga* than *Dhanyakadi Ghana Vati* with *Ushana Jala*.

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