A Comparative Study of Efficacy of Himanshwadi Churns with or without Takradhara in the Management of Vataj Grahani w.s.r. Irritable Bowel Syndrome

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Abstract

Introduction: Grahani is very common disease in society. In present era factors like stressful life, faulty and irregular habit of food intake, lack of time for food intake and deification result in dysfunction of digestive system. It becomes weak causing Garahani roga; Pravahika, Visuchika, Aalsaka which are similar to Irritable bowel syndrome, inflammatory bowel syndrome, ulcerative colitis and chron‘z disease mentioned in modern medicine. Most of the symptoms of Irritable Bowel Syndrome are enumerated in the conditions of Vataj Grahani delineated in Ayurvedic Classics. Himashwadi Churna is mentioned in Bhaishajya Ratnavali for Grahani Chikitsa.

Aim: To clinically evaluate the efficacy of Himanshwadi churna with or without Takradhara on Vataj Grahani(I.B.S.)

Materials and Methods: In this present clinical study, total 60 patients of Grahani Roga were registered and randomly divided into two groups. In A group Himanshwadi churna was given and Group B was given Himanshwadi churna with Takradhara therapy for 4 weeks. A clinical research performa was specially designed on the basis of the study drugs.

Results:
Excellent results in group A [70-80%] and in group B (70-95%) were found in symptoms like abdominal pain and abdominal discomfort. Both group showed good results [average 50-70%] were found in symptoms like Adhmanam, Shwas, Aasyavairasya, Grudhi Sarva Rasanam, alteration of bowel habit, Shushka, Tanu, Apakvam, Fenvat Malpravrutti and average results (25-50%) was found in Manasadanam, Karnaswana, Kruchapaka. Average percent relief in Group A and in Group B was found to be 61.47% and 74.13%, respectively. Therefore, it is more efficacious than group A as per average percent relief.

Conclusion: Statistically significant improvement was observed in all the symptoms in both the groups. While in comparison Group A showed better effect than Group B. It is concluded that Himanshwadi churna with Takradhara can be used as rather than without Takradhara Vataj Grahani (I.B.S.)
Keywords
Grahani, Himanshwadi Churna, Takradhara, Irritable Bowel Syndrome
INTRODUCTION

Gastrointestinal ailments cause a heavy economic burden on National Health Service. In our Ayurved science Grahani is an organ of GIT and Adhishthana of Agni (Jatharagni). The term —Grahani Dosha implies the malfunctioning of Agni. Agni is primarily located in Grahani (duodenum including upper part of small intestine). It receives the food (i.e., Grahan), retains the food (i.e., Dharana), till Pachana of Ahara (i.e., digestion). Grahani Dushti lead to conditions like Aruchi, Praseka, Ajeerna to Alasaka and life threatening toxic states like Visuchika. Functionally weak Agni i.e., Mandagni causes improper digestion of ingested food which leads to Grahani Dosha, and finally if not treated timely then Grahani Roga ensues, which is preliminary stage of Grahani Roga\(^2\)\(^-\)\(^3\).

"Grahani Dosha" is the leading disorder of the gastrointestinal tract. As the hypofunction of Agni i.e., Mandagni is the root cause of all the disease, Grahani Dosha is also mainly caused by Agnidushti. The main site of Agni and the disease-Grahani Dosha is the organ—Grahani, and considering no difference between Ashraya (shelter) and Ashrita (dependent), the malfunctioning mainly lies in the organ - Grahani, is called Grahani Dosha. The impairment of Agni is responsible for the creation and causation of Grahani Dosha, as the Agni is primarily located in the Grahani (duodenum including the upper part of small intestine). Thus Agni Dosha (malfunctioning of enzymes responsible for digestion) is implied by the term Grahani Dosha\(^4\).

Functionally weak Agni i.e., Mandagni causes improper digestion of ingested food, which moves either in Urduha or Adha - Marga; when it goes in Adho-Marga, then it leads to Grahani Gada i.e. Grahani Dosha\(^5\).

Acharya Charaka has described the Samprapti of Grahani Roga, step by step, which includes:

ETIOLOGICAL FACTORS → AGNI DUSTI → APACHANA → AMA
UTPATTI → SHUKTA-PAKA → ANNAVISHA OR AMAVISHA → GRAHANI

DOSHA → GRAHANI ROGA.\(^6\)

The disease Grahani is the leading disorder of the digestive system. Due to various etiological factors of Grahani Roga. The Grahani becomes impaired as a result of Dusti or Vitiation of Pacakagni and Samanavayu. The logical outcome of the Grahani dosha is firstly, the malabsorption...
of the ingested food, resulting in the production of product described by Caraka, Pakwa or Ama and secondly the malabsorption of the products of digestion. The Vaisamya of Samanavayu causes the hyper motility of gut, results in frequent evacuation of the bowel, which is large and hard or liquid.

Caraka has mentioned that the Visama, Tiksna Agni may cause Grahani dosha but Grahani roga is the consequence of only Mandagni, Cakrapanidatta has commented that in Grahani dosha, Grahani passes the food in the stage of Ama (Apakwa) because of weak Agni and affection of Doshas.

The treatment of Grahani Roga should proceed on the full recognition of Agnidusti. Grahani dosha and much more so, Grahani Roga, represents the dusti and dosa of Annavaha Srotamsi, with the obvious implication that, in either case, there is the manifestation of Amadosa and Sama. The main line of treatment should, therefore, aim at:

(a) Dosa Pratyantika Cikitsa in Grahani dosa and breaking up of the vicious circle phenomenon by Dipana and Pacana therapeutics, and

(b) Vyadhipratyanika Cikitsa in Grahani roga by properly conceived medicines (Dipana and Pacana) Aharas (Dietetices), Swedana, Vamana as well as Virecana, where there are indications for them. Oleation, Sudation, Purification and lightening therapies, articles that are gastric stimulants, various kinds of Curnas, salts, alkalis, honey Arista, Sura, Asava, various kinds of butter milk courses, and digestive stimulant ghee should be resorted to, by the patient suffering from Grahani.

Use of Takra in Grahaniroga treatment

When we go through the classical literatures like Charaka Samhita, Sushruta Samhita, Bhavaprakasha, Chakradatta etc, in the treatment of Grahani, Arsha we get the judicial use of Takra in the form of medication\(^7\). As Takra is Laghu in Guna, possesses Dipana properties and attains Mudhurapaka, it does not provoke and increase Pitta, because of its Kasaya Rasa, Usna Virya, Vikasi and Ruksa Gunas, it is also useful in Kapha; as freshly churned Takra is sweet, slightly sour and sufficiently thick, it will not produce Daha in the Kostha and it is also Vatahara\(^8\) The advantage of Takra is that it contains less fat and is easily digestible, Caraka has also suggested the use of Takra and Takrarista in the routine treatment of Grahani\(^9\).

Treatment of Vataja Grahani:
If Ama dosha has not been separated or is still present in Pakwasaya as undigested matter, Virecana and Snehana dravyas may have to be administered\textsuperscript{10}. When Amarasa is spread throughout the body Langhana and Pacana are indicated. After Kostha Sudhhi, Dipana Pacana Ousadha Siddha Peya is indicated. After Amapacana, small dose of Dipana Dravya Siddha Ghtra may be administered\textsuperscript{11}. In Vataj Grahani Acharya Charaka mentioned Deepan, Langhan and Paacha Chikitsa\textsuperscript{12}. Himanshwadi churna may helps in breaking Samprapti of Vataj Grahani due to properties like Dipan, Pachan, Vatamuoman, Agnivardhan as mentioned in Bhaishajya ratnawali. Himanshwadi churna used in Vataj Grahani w.s.r. IBS as medication for their management but medication along with psychological intervention gives more efficient results in IBS management.

**MATERIALS AND METHODS**

1. **Preparation of Himanshwadi churna** -
Himanshwadi churna was prepared by standard reference given in Bhaishajya Ratnawali\textsuperscript{13}. Coarse powder of Himanshu (kapoor) (1 part) Rasna (1 part) Panchlavan i.e. Saindhav lavan, Samudrik lavan, Romak lavan, Sourchal lavan, Bid lavan (1 part), Haritaki (1 part) Kshardvy i.e. Sarijjikshar & Yavkshar (1 part) Trikatu i.e. Soonthi, Pippali, Marich (1 part) fine churna of all the drugs was prepared. Rasa of Bijpuranimba was taken in equal quantity to mixture of all these ingredients. All the drugs along with Rasa of Bijpurakniumba were mixed carefully till obtaining homogenous fine churna.

**Matra (dose) - 5 gm**
Kala – Twice a day (Saman Vayu Kal)
Anupan : Koshna Jala

2. **Preparation of Takra for Dhara**:
Medicated curd is churned, sprinkling over with 200gms Amalaki pulp + 8 liters of boiling water and reducing it to 2 liters of Amalaki kwatha. Out of 2 liters 1.5 liters of āmalaki kwatha was added in curd, till all the butter is completely removed. The mixture of buttermilk and decoction thus, obtained is used for dhārā. The patients were previously anointed on the head with the Ksheerabāla oil.

**INGREDIENTS QUALITYs**
Amalaki 8 Tola= 80gm
Water 16 liter
Takra 1 liter

3. **Height of Takradhārā**:
Four Angula (Patient's) (3 inches) is the height for pouring the medicated buttermilk on the forehead of the patient but as per the K.P.K.V. height of Shirodhara is only two
Angula\textsuperscript{14}. In body it is three times more than above i.e., 12 Angula (9 inches) is advised in Dhārākalpa.

4. Dharan Kala (maintaining time of Takradhārā)

For the patient having dryness and Pittayukta Vāta, the Dharan Kala period is 2.5 Prahara. In Snigdha Kaphayukta Vāta, it is one Prahara or it should be up to perspiration. As per Ayurved Samhita one and half Yāma is Param Kāla for Dhārā\textsuperscript{15}. The patient has to remain in the supine posture on his back. Generally treatment is done in the morning hours preferably between 7 to 10 A.M.

CLINICAL STUDY

This study carried out in year 2013-14 with the approval of Smt. K.G.M.P. Ayurvedic Hospital, Mumbai. Ethical clearance was obtained from Institutional ethical Committee before commencement of study (KGMP/ETHICAL.COM/Thesis 2005/2013-14). Total 60 patients having signs and symptoms of Vataj Grahani were selected from Outpatient Department Smt. K.G.M.P. Ayurvedic Hospital, Mumbai. Informed consent was taken from each registered patient before starting the treatment. Those patients who have not able to report OPD regularly were rejected and replaced by another randomly selected subject.

SELECTION OF PATIENT

1. Inclusive Criteria:-

a) Patients between 20-70 yrs of age of both sex.

b) Patients showing classical symptoms of Vataj Grahani as mentioned in Brihatatrayi and other Samhitas.

c) K/C/O I.B.S. Diagnosed by sign and symptoms as mentioned in modern science

2. Exclusive Criteria:-

a) Patients below 20yrs and above 70yrs of age.

b) Pregnant and lactating women

c) K/C/O Abdominal Koch’s, CA of stomach

d) K/C/O gastric ulcers, intestinal obstruction

e) K/C/O ulcerative colitis and cronhs disease.

f) Those patients showing acute symptoms and symptoms indicating fatal consequences

MONITORING OF PATIENTS

Patient will be selected according to criteria described earlier for clinical study. General information will be elicited, complete medical history; physical examinations will be carried out.
WITHDRAWAL CRITERIA
A patient may be withdrawn from the trial in case of
i) Development/of occurrence of the life threatening illness.
ii) Severe adverse effect of drug occurring during the trial.

The decision of withdraw will be taken after discussion with guide who will give concerned treatment. Subjective criteria and gradation will be depicted in Table no.1

CLINICAL ASSESSMENT
Table 1 Subjective criteria:- Gradation of symptoms

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Lakshan</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Abdominal pain</td>
<td>Absent</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>02</td>
<td>Abdominal discomfort</td>
<td>Absent</td>
<td>Mild</td>
<td>Moderate</td>
<td>Tiredness on rest</td>
</tr>
<tr>
<td>03</td>
<td>Aadhmanam</td>
<td>Absent</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>04</td>
<td>Shwas</td>
<td>On heavy exertion</td>
<td>On exertion</td>
<td>Even after daily activities</td>
<td>Present even at rest</td>
</tr>
<tr>
<td>05</td>
<td>Aasyavairasya</td>
<td>Absent</td>
<td>Aasyavairasya</td>
<td>Aasyavairasya</td>
<td>Aasyavairasya</td>
</tr>
<tr>
<td></td>
<td>Related to only</td>
<td>Daily food</td>
<td>Seen on fresh</td>
<td>Seen all type of</td>
<td>Seen all type of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>and good food.</td>
<td>food</td>
<td>food</td>
</tr>
<tr>
<td>06</td>
<td>Shuktpaka</td>
<td>Absent</td>
<td>Sometime after</td>
<td>Regularly after</td>
<td>Commonly , not</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>taking food</td>
<td>taking some food</td>
<td>related to taking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>of food or not</td>
</tr>
<tr>
<td>07</td>
<td>Grudhi sarvrasanam</td>
<td>Absent</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>08</td>
<td>Trushna</td>
<td>Absent</td>
<td>Mild</td>
<td>Trushna occurs</td>
<td>Trushna occurs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>after taking</td>
<td>any time.</td>
</tr>
<tr>
<td>09</td>
<td>Karnaswanam</td>
<td>Absent</td>
<td>Mild</td>
<td>Sometimes</td>
<td>Frequently</td>
</tr>
<tr>
<td>10</td>
<td>Mana sadnam</td>
<td>Absent</td>
<td>Mild</td>
<td>Sometimes feel</td>
<td>Regularly or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>commonly</td>
</tr>
<tr>
<td>11</td>
<td>Kruchapaka</td>
<td>Absent</td>
<td>Mild</td>
<td>Sometimes</td>
<td>Regularly or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>commonly</td>
</tr>
<tr>
<td>12</td>
<td>Alteration of</td>
<td>Rarely</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Frequently</td>
</tr>
<tr>
<td></td>
<td>bowel habit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Shushka Tanu</td>
<td>Absent</td>
<td>Sometimes</td>
<td>Regular</td>
<td>Commonly</td>
</tr>
<tr>
<td></td>
<td>Apkwa</td>
<td>Mild</td>
<td>After meal</td>
<td>Regular</td>
<td>Commonly</td>
</tr>
<tr>
<td></td>
<td>Phenyukta</td>
<td>Mild</td>
<td>After meal</td>
<td>Regular</td>
<td>Commonly</td>
</tr>
<tr>
<td></td>
<td>Malapavritti</td>
<td>Somimes</td>
<td>Regular</td>
<td>Commonly</td>
<td>Commonly</td>
</tr>
</tbody>
</table>

Relief is characterized by reduction in symptoms from 3,2,1,0
Grades:-
0 – No relief in associated symptoms
1(+) – Mild relief in associated symptoms
2(++) – Moderate relief in associated symptoms
3(+++ – Complete relief in associated symptoms
INVESTIGATION

Investigations done in this study is depicted in Table no.2

Table 2: Parameters of conducted investigation

<table>
<thead>
<tr>
<th>Pathological Parameters</th>
<th>Radiological Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC/ESR</td>
<td>Barium meal of lower GIT</td>
</tr>
</tbody>
</table>

MALA PARIKSHAN

Sam Niram, Shushka ,Muhurbadham ,Muhur Dravam ,Phenyuktam ,Sashabdam Malapravruti.

STUDY DESIGN

Screening of subject for inclusion (counseling, informed and consent) → Open comparative type of clinical study → Initial Assessment

Aahar Vihar Common to Both Groups

Intervention

Group A

No. of patients 30

Himanshwadi churna

30 days after Lunch/Dinner

& Takradhara 240ml for 21 days

Assessment at the end of the treatment → Follow-up taken at 1,2,4 wks → Statistical Analysis → Conclusion

Statistical Analysis:

Though the data collected in this study was 'Rating Scale’ data; both parametric as well as nonparametric tests could be applicable. But after treating this data by statistical software, it was found that distribution of data was not according to normal distribution [gaussian distribution]. That is
why ‘t’ test was not applicable [as for application of t test requires data to be have normal distribution]. After taking expert advice of Statistician, data was treated with first WILCOXON MATCH PAIRED TEST for every symptom of each group to check whether given treatment makes any changed in disease or not.

**OBSERVATIONS:**

Among 60 patients who have completed the treatment and follow-up were observed for Prakurti wise classification and it is found that majority of patients were of Vata-Kaphaj Prakurti (28.66%), hence it shows they are more prone to disease. The incidence of this disease was seen higher in service going people (46.66%), 72% patients were from urban area, (45%) patients had tea as addiction. 36.66% of patients had Mandagni, obviously it is the reason for Grahani Roga, remaining 46.66% of patients had Visamagni which is once again a prime factor in the pathogenesis of Grahanidosa and ultimately Grahaniroga. Apart from other Nidana Virudh ahara (Vishmasha) ( 45%) and Manasika (36.66%) Karana were found to be the main aetiological factors which clearly points towards lifestyle and habits in this area. Maximum patients are having sentimental emotional status (35%) followed by Depression emotional Status (26.66%). Weak emotional status which indirectly affects digestive system causing Agnidushti which leads to Grahani. Krura Koshta was found in 46.66% of patients which may be due to vitiation of Samana Vayu which plays an important role in the pathogenesis of Grahani. This shows that maximum patients approached were of chronicity between >20-40 (58.33%) Rest were between >15-20 (23.33%) in these mostly exposed to stressful life, roadside eating, having faulty food habit so these group prone to Vataj Grahani.

**RESULTS**

**Effect of therapy on Subjective Parameters**

In Group-A excellent [70-80%] results were found in symptoms like abdominal pain, abdominal discomfort, good results [50-70%] were found in symptoms like adhmanam, Shwas, Aasyavairasya, Grudhi Sarva Rasanam, alteration of bowel habite, Shushka, Tanu, Apakvam, Fenvat Malpravrutti and average results (25-50%) was found in Manasadanam, Karnaswana, Kruchapaka. Whereas in Group-B; excellent results (70-95%) were found in symptoms
like abdominal discomfort, *Shwas*, *Aasyavairasya*, *Shuktapaka*, *Grudhi Sarva Rasanam*, *Trushna*, *Krucapaka*, *Manasadanam*, *Karnswanam*, Alteration of bowel habit and *Shushka*, *Tanu*, *Apakvam Fenavat Malpravrutti*. Good results [50-75%] were found in symptoms like abdominal pain and Aadhanam. Average percent relief in Group A and Group B is 61.47% and 74.13% respectively. This prediction indicates better result in group B.

**Effect of therapy on Objective Parameters**

On the basis of *Malaparikshan*, it is clear that there is no significant difference between results of Group A & Group B in objective parameters.

**DISCUSSION**

Considering, gradation of symptoms most of the symptoms in group A showed extremely significant results. In Group-A excellent [70-80%] results were found in symptoms like abdominal pain and abdominal discomfort. Moderate relief [50-70%] was observed in symptoms like flatulence, breathing difficulty, tastelessness, alteration of bowel habit, *Shushka*, *Tanu*, *Apakvam*, *Fenvat Malpravrutti* and average result (25-50%) was found in *Manasadanam*, *Karnaswana*, *Krucapaka*.

Statistically, almost all the symptoms in group B showed extremely significant results which are better compared to group A. It is evident from statistical data that significant effectiveness regarding symptoms such as *Karnaswana*, *Mansadanam* (psychological symptoms) is more in group B than group A which is due to application of *Takradhara* therapy (psychological intervention) in group B.

To understand the difference in efficacy of both groups, unpaired ‘t’ test and was applied, which shows group B is better than group A. The results of this study have undoubtedly established the supremacy of *Himanshwadi churna* with *Takradhara* over *Himanshwadi churna* itself alone. In objective criterion All investigation should be normal so no change in objective criterion but on the basis of *Mala Parikshan* i.e. *Samayukt Apakva* form of stool consistency get converted in the form of *Pakva Niram Swarup*.

On the basis of objective criterion *Malaparikshan* (*Malaswarup*), Group A gives very significant result and group B gives extremely significant results but there is no significant difference between results of Group B & group A in objective
symptom wise parameters on the basis of Malaparikshan. Takradhara significant decreases the intestinal motility. Hence, it would be essential to discuss the probable mechanisms of this action. Gut motility to large extent is controlled by a two important nerve plexus system together grouped under the heading of enteric nervous system. It is a large and highly organized system. It includes myenteric plexus (plexus of Auerbach) and submucosal plexus (plexus of Meissner). Both these neuronal plexus receive pre-ganglionic parasympathetic and post-ganglionic sympathetic fibers. Further they receive sensory stimuli from within the structure present on the gut wall. The smooth muscle fibers present in the gut wall receive nerve fibres from the cells of these plexuses and their activity controls the motility of the gut. Further the motility is also modulated by locally released prostaglandins which are known to stimulate intestinal motility and secretion. It can be suggested that Takradhara contains active constituents and Ojovardhak, Agnivardhak like properties decrease intestinal motility probably through attenuating. The effect of excitatory neurotransmitter or interfering with their bio-synthesis. It is also possible that they may be acting through neuronal blocking. Another possible mechanisms is that it may be enhancing the activity or formation of inhibitory neurotransmitter and neuromodulators. Takra has Amla Kashaya Rasa, Usna Virya, Laghu, Ruksa-Grahi Guna all these are 'Sthambhaka' and 'Grahi' properties. It can be assumed that Ojovardhak property reduces stress. These properties confirm the role of Takradhara reducing the intestinal motility and increasing the faecal output and excretion of well formed stools improving the absorption. Clinical studies involving larger sample size and advanced laboratory technologies are needed to scientifically evaluate the effect of similar therapy with physiological and pathological point of view.

CONCLUSION
The clinical trial showed excellent results in both the trial groups. This proved the utility and relevance of Himanshwadi churna as well as Himanshwadi churna with Takradhara. During study, no patient showed deterioration in symptoms after commencement of treatment. Samyak Poorva karma like Deepan-Paachan, etc. is very important so as to avoid Vyapada [complications] in Takradhara therapy. Both groups gives extremely significant results in Malaswaru (consistency of
The clinical improvement provided by Himanshwadi churna & Himanshwadi churna with Takradhara presents new availability in the management of Vataj Grahani (IBS), so that the Quality of life of the patients can definitely be improved. For more validity & confirmation of result, study should be conducted in population with large population size. Also, various other combinations of formulations of Siddha Ghritas may be tried clinically.
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