

A Clinical Study to Evaluate the Efficacy of Chitrakadi Churna In Vataj Grahani W.R.T. Irritable Bowel Syndrome

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Abstract:

Complaints related to digestive system are increasing day by day in all stages of life in all classes of society especially in developing country. So there is need to focus on Digestion and its diseases. Today's stressful life style has major effect on *Agni* and digestive system. Thus any change in *Agni* causes impaired digestive function which leads to *Grahani Roga*.

Irritable bowel syndrome is functional Bowel disorder characterized by chronic abdominal pain with discomfort, abdominal bloating, alteration of bowel habits as well as certain Psychological conditions like anxiety, depression, fatigue, tinnitus, sleep disturbance. These symptoms have at most similarities with features of Vataj Grahani explained in clinical text books of Ayurveda.

Ayurveda described various treatment modalities for the management of *Grahani roga* such as; use of herbs & formulation, yoga and life style modification. In present study 30 patients were randomly selected and assigned under a single group by confirming the clinical features of Vataj *Grahani*. *Chitrakadi Churna* was administered 3 gms twice in a day with *Takra* as *Anupana* for 30 days. The results obtained on the parameters of study were highly significant with $p < 0.001$.

Agni chikitsa is very important to treat this *Grahani vyadhi* properly. *Chitrakadi churna* has properties like *Deepana*, *Pachana*, *Vatanulomana*, and *Agnivardhana* which improves digestive power and helps in the management of Vataj *Grahani*.

At the end with obtained results it can be concluded that the *Chitrakadi Churna* is very effective in the management of Vataja *Grahani* i.e. IBS.

Key Words: Agni, *Grahani*, Irritable Bowel Syndrome (IBS), *Chitrakadi Churna*.

Introduction:

In the present era, people have disregarded the codes for bodily health as well as healthy mind also. Some factors like stressful life, improper & irregular food habits, lack of time for food intake & defecation which hamper digestive system. As the digestive system becomes weak it leads to various diseases related to digestion like *Grahani roga*, *Pravahika*, *Visuchika*, *Alasaka* which can be correlated with modern aspect like IBS, Ulcerative colitis, Crohn's disease etc. There is no any individual, who does not fall victim to some GIT disorders during his life span. The changing lifestyle of human beings, by means of diet & behavioral patterns, play a major role in manifestations GIT disorders. Recurrent GIT disturbances lead to diseases like *Grahani* (IBS).

As per *Ayurveda* *Grahani* and *Agni* are interdependent. If the *Agni* is maintained properly then the individual will be free from many diseases, if it gets vitiated then individual becomes *host* for ample number of diseases, among them *Grahani* is the most prevalent disease in these days. Among different varieties of *Grahani*, the cardinal features of Vataj *Grahani* explained in the clinical texts book of Ayurveda, have at most similarities with the clinical features of Irritable Bowel Syndrome explained in modern medicine.

According to *Acharaya Charak*, *Grahani* which is the site of *Agni* is so called because of its power to restrain (*Grahanat* - the downward movement) food. It is located above the umbilical region, and is supported and nourished by the strength of *Agni*. Normally it restrains the downward movement of undigested food and after the digestion, it release the food through its lumen.⁽¹⁾ In the abnormal condition, when it gets vitiated because of weakness of *Agni* it releases the food in undigested form only.⁽²⁾ *Acharaya Sushruta* elucidates that the *Shashthipittadharakala* situated in between the stomach and the large intestine is called *Grahani*.⁽³⁾ According to *Ashtang Sangraha*, the ingestion, digestion, absorption and assimilation of the four type of *Aahaar* and the subsequent elimination of the waste material is done by *Grahani*.⁽⁴⁾ According to *Chakrapani*, *Trividh* anomalies of the *Jatharagni* is called *Grahanidosha*.⁽⁵⁾

Need for study:

It is found that 20% of people are affected with IBS. Females are more prone to this disease than males in the ratio 2:1. Fifty percentage of patients present less than 45 years old.⁽⁶⁾ Hence it indicates prevalence in the society and demands for a study. But there is no specific therapy identified to manage this disease effectively in the present medical sciences even till

today. Where as in *Ayurvedic* system of medicine, we select the drugs which act on *Agni* which is the main causative factor for *Grahani* the drugs, which are selected for the appropriate management, and also to prevent its reoccurrence.

Chitrakadi Churna is the best *Yoga* mentioned in our classics for the management of *Grahani roga*, with the reference

from “*Sharangdhar Samhita*”⁽⁷⁾ All the drugs present in *Yoga* have *Katu-Lavan rasas*, *Laghu gunas*, *Ruksha gunas*, *Ushna viryas*, *Katu – Madhur vipaka*, *Deepana*, *Pachana*, *Grahi*, *Grahani hara* properties. Hence, the study of *Chitrakadi churna* in *Vataj Grahani* is carried out.

Contents of the *Chitrakadi Churna*:

One Karsha matra each -	
1. <i>Chitraka (Plumbago Zeylanica)</i>	5. <i>Pippalimool (Piper Longum Radix)</i>
2. <i>Sunthi (Gingiber Officinale)</i>	6. <i>Chavya (Piper Chaba Hunter)</i>
3. <i>Hingu (Ferula Narthex)</i>	7. <i>Ajamoda (Carum Roxburghianum)</i>
4. <i>Pippali (Piper Longum)</i>	8. <i>Marich (Piper Nigrum)</i>
One Kol matra each -	
9. <i>Sajjikshar</i>	13. <i>Beeda lavan</i>
10. <i>Yavakshar</i>	14. <i>Samudra Lavan</i>
11. <i>Saindhav lavan</i>	15. <i>Romak Lavan</i>
12. <i>Souwarchal lavan</i>	

Aims & Objectives:

1. To study the efficacy of The *Chitrakadi Churna* in the management of *Vataj Grahani* w.r.t. to IBS.
2. To find out the mode of action of *Chitrakadi Churna* in the treatment of the *Vataj Grahani* / IBS.

Materials & Methods:

Material - *Chitrakadi Churna*

Patients were administered *Chitrakadi Churna* in the Dosage of 3gms twice daily for a period of 30 days with butter milk as *Anupana*.

Methods -

Research design

It was a single blind clinical study with pre and post test design. The patients were assigned to single group and were administered *Chitrakadi Churna*. The results were analyzed statistically.

Source of data

The data was collected from the patients, who were diagnosed as *Vataj Grahani* (IBS) was taken for the study from the OPD and IPD Dept. of Kayachikitsa, Dr. V. J. D. Ayurved Mahavidyalaya, and attached Hospital Patur, Dist. Akola, Maharashtra, India. Out of 34 patients registered, 30 patients completed the study.

Sampling method

Total number of 30 cases excluding dropouts were taken and Assigned into a single group.

Duration of treatment

30 days. Review once in every 10 days.

Method of Preparation:

The dried drugs of above contained are taken. They are made into fine powder and sieved well.

Method of Administration:

Oral Dose: 3 gms, twice a day.

Anupana: *Takra* (Butter milk).

Time of Administration: *Vyan kala* i.e. *Pratah Bhojanottar* & *Udana kala* i.e. *Sayam Bhojanottar* (After food).

Criteria for Selection of Drugs

All the Drugs present in *Yoga* have *Katu-Tikta- Lavan Rasas*, *Laghu Ruksha Gunas*, *Ushna Veerya*, *Katu - Madhur vipaka*, *Deepana*, *Pachana*, *Grahi*, *Grahanihara* Properties.⁽⁸⁾

Takram is selected as *Anupana* because it has *Deepana*, *Grahi* and *Laghu Gunas*. It is very useful in *Grahani*.

Special Qualities of Drugs are as follows -

1. **Panchakol** : Good Digestive Agents, improves appetite, reduce gas, stops Diarrhoea, Vatakapaghna, antimicrobial, anti-spasmodic properties. Useful in indigestion and worm troubles.
2. **Hingu** : Useful in digestion, improves appetite, normalizes peristaltic movements, useful in worm troubles.
3. **Marich and Ajmoda** : Good Digestive Agent, control G.I. Condition, normalizes Peristaltic movements, improves appetite, reduce gas, stops Diarrhoea,

4. **Kshardwaya:** Useful in Digestion and promotes appetite, antimicrobial activity, helpful in worm problem.
5. **Panchalavana :** Useful in digestion, constipation. It improves appetite, removes gas and soothes heartburn.

In view of the presence of all the above special properties of these drugs have the perfect indications to manage the *Grahani* (IBS).

Importance of *Takra*:

Anupanas improves the drug absorption and proper utilization to treat the cause where in the study *Takra* is the Best *Anupana* explained Acharya Vagbhata, Yogratna kara, Bhavaprakash. Charaka described *Takra gunas* as follows:

1. Due to its *Deepana*, *Grahi* and *Laghu gunas* especially in the disease *Grahani* frequency of the Stools are being initiated to control the excessive peristalsis.
2. Even though *Takra* has *Amla rasa* it will not provoke *Pitta* as it is having *Madhura vipaka*.
3. Due to its *Kashaya*, *Ushna*, *Vikasi gunas* it control *Kapha* even though it is having *Abhishyandadi guna*.
4. By virtue of its *Sandra*, *Amla*, *Swadugunas*, it will not vitiate *Vata* even though it posses *Kashaya ruksha gunas*.

According to modern buttermilk is having antibacterial effect. Buttermilk is made with the help of *Bacillus lacti* from milk and this Bacteria will be present in Acetic Acid and they enter into the intestines along butter milk consumed and produce same acids having Anti-bacterial effect and protect the intestines from infection.

By above *Gunas Takra* is best in *Grahani Roga*, as it is having both dietetic and medicinal value.

Inclusive Criteria:-

1. Patients between 20-60 yrs of age of both sex.
2. Patients showing classical symptoms of *vataj grahani* as mentioned in *brihatatrasyi* and other *samhitas*.

3. Known case of I.B.S. diagnosed by sign and symptoms as mentioned in contemporary science.
4. Patients irrespective of sex, religion, occupation were selected for the study.

Exclusive criteria

1. Patients below 20 years and above 60 years were excluded.
2. Known case of Amoebiasis, Tropical sprue, Mal absorption syndrome, Ulcerative colitis, Crohn's disease, Celiac disease, gastric ulcers, intestinal obstruction.
3. Carcinoma and tuberculosis of stomach and intestine,
4. Pregnant and lactating women.
5. Any serious life threatening disease.

Parameters for the assessment Subjective

1. *Muhur badda muhur drava mala pravritti* (altered bowel habits)
2. *Udara shoola*. (Pain abdomen)
3. *Amayuktha mala*. (Mucus in stools)
4. *Vistambha* (Sense of incomplete evacuation)
5. Gas or flatulence
6. Other symptoms

Objective

1. *CBC, ESR, CUE, RBS*.
2. *Stool examination for ova and cyst, Occult blood*.

Above all investigation has been done to see patient's general condition and to rule out any other pathology. These investigations were not the part of diagnostic criteria for *Grahani Roga*.

The data was collected before the treatment and after the treatment of 30 days. One more follow up data was collected after the treatment. The data obtained was analyzed statistically by applying statistical methods.

Table 1: Showing the Symptoms and scoring grades

Symptoms	Criteria	Scoring
1. <i>Baddhamala Pravritti</i>	1) Normal once daily	B0
	2) Alternate days	B1
	3) Once in 2 days	B2
	4) Once in 3 days	B3
	5) Once in 4 days	B4
2. <i>Drava mala pravritti</i>	1) Normal once daily	D0
	2) Twice daily	D1
	3) 2- 4 times daily	D2
	4) 4-6 times daily	D3
	5) >6 times daily	D4
3. <i>Udara shoola (Discomfort)</i>	1) No abdominal pain.	P0
	2) Occasionally or rare abdomi- nal pain.	P1
	3) Intermittent abdominal pain relieved by passage of Flatus or stool.	P2
	4) Continuous pain not relieved by Passage of flatus and stool	P3

Cont...

Table 1: Showing the Symptoms and scoring grades

4. Vistambha (Sense of incom- plete evacuation)	1) No vistambha.	V0
	2) Feeling of incomplete evacua- tion once in a week.	V1
	3) Feeling incomplete evacuation daily	V2
	4) Not clear bowel even after 2-4times stool passed.	V3
5. Amayukta mala (Mucus in stool)	1) No visible mucus in stool	A0
	2) Visible sticky mucus in stool	A1
	3) Passage of mucus with frequent stool.	A2
	4) Passage of large amount of mu-cus in stool.	A3
6. Gas (or flatulence)	1) No abnormal gas/flatulence	G0
	2) Occasionally abdominal distension.	G1
	3) Frequent abdominal distension with increased flatulence and belching.	G2
	4) Rumbling/gargling sound present in abdomen	G3
7. Other Symptoms	1) No Symptoms	O0
	2) 1-3 Symptoms	O1
	3) 4-5 Symptoms	O2
	4) More than 5 symptoms	O3

Discussion:

Chitrakadi churna :

This is a reference from *Sharangdhar Samhita*. It was chosen for *Ama pachana* because of its indication for *Deepana Pachana* effect. Drugs present in this yoga are *Panchakol, Hingu, Marich, Ajamoda, Kshardwaya, Panchalavan*. *Panchakol* powder helps to regulate digestion & metabolism. *Panchlavan* digests undigested *ama* and increases *Jatharagni*.^[9] *Hingu, Marich and Ajamoda* having *Deepana, Pachana* and *Grahi* property and also indicated in *Grahani roga*. Along with *Takra*, this *Chitrakadi churna* controls chronic stages of *Grahani*. *Takram* is selected as *Anupana* because it has *Deepana, Grahi* and *Laghu gunas*.

The sum total effect of the *Chitrakadi churna* are as follows -
RASA: *Lavan, Tikta, Katu*; **VIPAKA:** *katu, mad- hur*; **VIRYA:** *ushna*; **GUNA:** *Laghu, Ruksha, Tikshna*; **KARMA:** *Dipan, Pachan , Aampachan, Agnivardhan*; **DOSHAGHNATA:** *vata- kaphagna*; **DUSHYA :** *Rasa dhatu, STROTSA: Annavaha, purishvaha*.

In *Grahani* mainly there will be vitiation of *Agni*, usually *Mandagni* is seen. This ultimately results in *Aama* formation

and also may lead to *Shuktapaka. Chitrakadi Churna* due to its *Lavan, Tikta, Katu Rasa; Katu, Madhur Vipaka; Laghu, Tikshna Guna*, acts as *Agni Dipaka* and also *Amapachaka. Tikta Rasa and Laghu, Ruksha Guna* help in reducing the colonic motility and thereby reduces *Muhurbadham Muhurdravam Mala Pravrtti* (Irregular consistency of Stool). Thus *Chitrakadi Churna* acts on *Grahani* and helps to overcome disease process and provides beneficial action.

According to observation and result; Among 30 patients, 9 patients gave a history of irregular food habits before the onset of *Grahani*. According to *Charakasamhita*, it is mentioned that “yo hi Bhunkte vidhim tyaktva *Grahani doshajan gadan sa laulyat labhate sheeghram*.”⁽¹⁰⁾ So this particular *Nidana* has major role in *Grahani roga*. 8 patients gave a history of *Atyambupana* i.e. they had a habit of drinking two to three liters of water in the morning with empty stomach. It is mentioned in the text books of *Ayurveda* that *Atyambupana* is one of the *Nidana* of *Agnimandya*,⁽¹¹⁾ it leads to *Grahani*. 5 patients gave a history of *Atisara*. This particular factor is very much in support for the *Madhavanidan* quotation as “*Atisare nivruttepi*.”⁽¹²⁾

Observations & Results:

Table 2: Showing the observation and results in *Dravamala Pravritti*

	Normal Once daily	Twice daily	2-4 times Daily	4-6 times Daily	More than 6 times daily	Total
BT		2	19	8	1	30
Percentage		6.67%	63.33%	26.67%	3.33%	100.00%
AT	25	5				30
Percentage	83.33%	16.67%				100.00%
AF	14	15	1			30
Percentage	46.67%	50.00%	3.33%			100.00%

Table 3: Showing the observation and results in *Baddhamala Pravritti*

	Normal Once daily	Alternative Days	Once in 2 Days	Once in 3 days	Once in 4 days	Total
BT	12	4	8	6		30
Percentage	40.00%	13.33%	26.67%	20.00%		100.00%
AT	28	2				30
Percentage	93.33%	6.67%				100.00%
AF	25	5				30
Percentage	83.33%	16.67%				100.00%

Table 4: Showing the observation and results in *Udarashoola / discomfort*

	No abdominal pain	Occasional/ rarely Abd. Pain	Intermittent lower Abd. Pain, Relieved by passage of Flatus and stool	Continuous pain not relieved by passage of Flatus and Stool	Total
BT		18	12		30
Percentage		60.00%	40.00%		100.00%
AT	26	4			30
Percentage	86.67%	13.33%			100.00%
AF	22	8			30
Percentage	73.33%	26.67%			100.00%

Table 5: Showing the observation and results in *Amayukta Mala Pravritti*

	No Visible Mucous in Stool	Visible sticky mucus stool	Passage of Mucous with frequent stool	Passage of large amount of mucous in stool	Total
BT	10	11	9		30
Percentage	33.33%	36.67%	30.00%		100.00%
AT	26	4			30
Percentage	86.67%	13.33%			100.00%
AF	23	7			30
Percentage	76.67%	23.33%			100.00%

Table 6: Showing the observation and results in *Vistambha (Sense of incomplete evacuation)*

	No Vistambha	Feeling of incomplete evacuation once in a week	Feeling incomplete evacuation daily	Not clear bowel even after 2-4 times stool passed	Total
BT		2	19	9	30
Percentage		6.67%	63.33%	30.00%	100.00%
AT	24	6			30
Percentage	80.00%	20.00%			100.00%
AF	14	15	1		30
Percentage	46.67%	50.00%	3.33%		100.00%

Table 7: Showing the observation and results in Gas or Flatulence

	No abnormal Gas	Occasional Abd. Distension	Frequently Abd. Distension with Increased flatulence and belching	Rumbling or Gurgling sound present in abdomen	Total
BT		18	12		30
Percentage		60.00%	40.00%		100.00%
AT	28	2			30
Percentage	93.33%	6.67%			100.00%
AF	26	4			30
Percentage	86.67%	13.33%			100.00%

Table 8: Showing the observation and results in Other Symptoms

	No symptoms	1-3 symptoms	4-5 symptoms	More than 5 symptoms	Total
BT 18	11	1			30
Percentage	60.00%	36.67%	3.33%		100.00%
AT	29	1			30
Percentage	96.67%	3.33%			100.00%
AF	28	2			30
Percentage	93.33%	6.67%			100.00%

After the statistical analysis of the results, the results shown were highly significant (P value <0.001) with regard to all symptoms consider for grading. During the follow up period patients were advised to continue the *Pathya* which was practiced during treatment i.e. *Laghu aahara*, less spicy diet, intake of *Takra* and meditation.

1. After treatment 30 patients got relief from *Dravamala pravritti*. This may be due to *Grahi* property of drugs present in these formulations. Improvement in this condition was seen much earlier when compared to other symptoms.
2. Among 30 patients, no patient had particularly constipation predominant IBS and most of the patients had diarrhoea predominant IBS, only some patients had diarrhoea altered by constipation i.e. is mixed type. After treatment 28 patients had no *Baddha mala pravritti* and 2 patients had alternate days *Baddha mala pravritti*. By this it can be concluded that *Chitrakadi Churna* work in all types of IBS, irrespective of frequency of stools.
3. After treatment 26 patients got relief from *Udara shoola*, 4 patients had occasional *Udara shoola*. This formulation controls *Udara shoola* by having *Deepana*, *Pachana* properties by *Amapachana*.
4. After the treatment 30 patients had normalcy in motion with no *Vistambha* or once in week. *Chitrakadi Churna*

controls this symptoms, because of having purgative, stomachic, digestive, emollient, *Deepana*, *Pachana* properties and also having the capacity of controlling the *Vata*.

5. After treatment 26 patients had no mucus in stool, 4 patients had sticky mucus in stool. This results due to *Deepana* and *Pachana* action of the contents.
6. 28 patients got relieved of flatulence and 2 patients had occasional abdominal distension. As the other symptoms of *Grahani* had subsided they were advised to consume hot water, avoid legumes and eat hot and fresh food and use more *Takra*, which relieved the distension.
7. After treatment 29 patients got complete relief from other symptoms and one patient had 2 symptoms. This again shows the efficacy of *Chitrakadi Churna* in relieving the symptoms.

Overall assessment

In the overall assessment 26 (86.67%) patients showed good relief of all the symptoms, 4 (13.33%) patients showed moderate relief.

Conclusion:

Grahani roga represents a group of digestive disorder. It is closely linked with *Agnimandhya*, *Koshta gata vata* and *Atisara*. Impaired *Agni* and *Samana vata* are the most

predominant factors in the pathogenesis of *Grahani*. The etiological factors responsible for IBS, identified by various surveys, fit in to the *Nidana* of *Grahani*, explained earlier in the Ayurvedic text books.

Hence it can be concluded that IBS can be treated in Ayurveda under the treatment principles of *Vataja Grahani*. *Chitrakadi Churna* target the *Agni*, *Pitta* and *Vata dosha* in *Grahani roga*. It also satisfies the *Chikitsa sutra* of *Grahani* and shows good clinical improvement.

Hence With these obtained results it can be concluded that the *Chitrakadi Churna* is quite effective in the management of *Vataja Grahani* (IBS) & it can be considered as the new availability in *Vataja Grahani*/IBS so that quality of life can be improved.

Source of Support: Nil

Conflict of Interest: Nil

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