

A comparative clinical study on the effect of *Takra Basti* and *Erandamooladi Niruha Basti* in the management of *Grahani* (IBS)

Research Article

Mallikarjun M^{1*}, Channabasavanna B M², Sandeep Aggarwal³, Srinivasulu M⁴

1. Professor, Department of Panchakarma, 3. Principal and Dean

Vivek College of Ayurvedic Sciences & Hospital, Bijnor, Uttara Pradesh. India.

2. Professor and HOD, Dept of Panchakarma N.K. Jabshetty Ayurvedic Medical College & PG Centre, Bidar, Karnataka. India.

3. Retired Professor and HOD, P.G Dept of Panchakarma, Govt. Ayurvedic college Hyderabad. Telangana. India.

Abstract

Background-*Grahani roga* described in classical text books of *Ayurveda* represents a group of disorders of digestive system caused by impairment of *Agni*. *Grahani* is such a disorder, where in its significance is emphasized by its inclusion among *Ashta maha gadas*. Aim & Objective- To evaluate the efficacy of *Takra Basti* and *Erandamooladi Niruha Basti* individually in each group in the management of *Grahani*. To compare the efficacy of *Takra Basti* and *Erandamooladi Niruha Basti* in the management of *Grahani*. Methodology- Patients were selected from college attached Hospital of NKJ AMC Bidar. Sample size -A total of 30 patients were selected GROUP A: 15 patients were treated with *Takra Basti* and *Changeryadighrita Anuvasana Basti*. GROUP B: 15 patients were treated with *Erandamooladi Niruha Basti* and *Changeryadighrita Anuvasana Basti*. Discussion & Conclusion-Among the types of *Grahani*, clinical features of *vataja Grahani* have at most similarities with the clinical features of irritable bowel syndrome. Diagnostic criteria of IBS i.e. Rome III criteria is same as the *Pratyatmaka lakshanas* of *Grahani*. *Takra Basti* is having more *pratyagamana kala* than *Eradamooladi Niruha Basti*. Both *Takra Basti* and *Eradamooladi Niruha Basti* Showed significant results in all the parameters. The efficacy of the treatment group A results was statistically significant of all parameters statistically even after follow up period compared to group B. Hence it can be concluded that IBS can be treated in *Ayurveda* under the treatment principles of *Vataja Grahani*.

Key Words: *Grahani*, Irritable Bowel Syndrome, *Takra Basti*, *Erandamooladi Niruha Basti*.

Introduction

In *Ayurveda*, *Ayu*(life) is defined as conjunction of body, soul, mind and senses. It has been given due importance in the prevention and curative aspect of disease. A healthy mind in a healthy body is the principle aim guiding all the prevailing systems of medicine. In present time, unwholesome food habits and changes in life style, mental disturbances like anxiety, grief, stress & strain etc which leads Gastric-upset (*Agnimandhya*), which is a root cause for the manifestation of Gastric diseases like *Amlapitta*, *Atisar*, *Pravahika*, *Grahani* etc.

Grahani roga described in *Ayurveda* represents a group of disorders of digestive system caused by impairment of *Agni*.(1-3). *Grahani* is such a disorder, where in its significance is emphasized by its inclusion among *Ashta maha gadas*.(4) Imbalance of

Agni, *Samanavata*, *Pachakapitta*, & *Kledaka kapha* are the most predominant factors involved in the pathogenesis of *Grahani roga*. Once the disease manifests, secondary factors such as *Apanavata* and *Pranavata* also have significant role in the further progression of the disease.

The cardinal features of *Grahani* explained in the classical text books of *Ayurveda*, have at most similarities with the clinical features of Irritable Bowel Syndrome (IBS) explained in western medicine. Irritable Bowel Syndrome (IBS) is a disorder of G.I.tract which prevails in majority of the global population.(5) Irritable Bowel Syndrome (IBS) is one of the commonest diagnosis given to patients attending gastroenterology Clinics. It is found that 15% of the general population is suffering with this disease, and become a major health problem in younger people.(6)

The general line of treatment for *Grahani* as per *Charaka samhita* includes *Sadhyovamana* (in *saamaavasta kaphotklesha*), *Deepana*, *Shodana*, *Peyadikrama*, *Basti* and *Shamanoushadis*. The "*Basti*" *chikitsa* is of prime importance among *Panchakarma* because of its wide applicability in various conditions in various forms. *Basti chikitsa* is one of the *Shodhana* therapy which possess evacuatory, nourishing, as well

* Corresponding Author:

Mallikarjun M

Professor,

Department of Panchakarma,

Vivek College of Ayurvedic Sciences & Hospital,

Bijnor, Uttara Pradesh. India.

Email Id: drmhmarkunda@gmail.com

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as *Deepana* qualities.(7) Moreover is the choice of treatment in *Grahani Roga*.(8,9)

Takraprayoga in *Grahani* is highlighted as the best *Aushadhi* in all the classics of *Ayurveda*, which possess *deepana*, *grahi* & *laghu* *gunas*.(10) *Charaka* explains *takra* as *basti dravya* under *Amlaskanda* which is one among *shadasthapanaskanda*.(11,12) *Sushruta* mentioned *takra* as *avapadravya* in *Grahi basti*.(13) Hence *Takra* is given as *Basti dravya* in one group in management of *Grahani*.

Erandamooladi Niruha Basti is used to treat the *Grahani*. *Erandamooladi Niruha Basti dravyas* possess properties like *Deepana*, *Pachana*, *Grahi*, *Krimighna* and *Vatakaphahara* in nature. Hence in another group *Erandamooladi Niruha Basti* is given in the management of *Grahani*.(14)

In this clinical study, *Takra Basti* and *Erandamooladi Niruha Basti* were given as *Yoga Basti* in two different group, in both the group *Anuvasana Basti* was given with *Changeryadi ghrita*.(15)

Aims and objectives

- To evaluate the efficacy of *Takra Basti* and *Erandamooladi Niruha Basti* individually in each group in the management of *Grahani*.
- To compare the efficacy of *Takra Basti* and *Erandamooladi Niruha Basti* in the management of *Grahani*.

Materials and Methods

Source of Data

- Patients were selected from college attached Hospital of N.K.Jabshetty Ayurvedic Medical College, Bidar.
- *Ayurvedic* Classics, Journals, magazines, seminars, conferences, digital library and web sites.
- Materials –raw drugs were collected from the *Ayurvedic* pharmacy under the supervision of *Dravyaguna* specialist.
- *Rasashala* & *Bhaishajya Kalpana* attached to college for preparation of medicine under the supervision of *Rasashastra* & *Bhaishajya* expert.
- The *Basti karma* was conducted in *Panchakarma Theater*.

Methods of collectionof data

This is a comparative clinical study, in which 30 patients (15 in each group) were selected on the basis of simple randomized sampling method as per inclusion criteria.

Inclusion criteria

- Patients complaining of *Muhurbadda dravamala pravritti*, *Muhurmuhurmala pravritti*, *lakshanas* of *Grahani* were selected.
- Patients between age group of 18-70yrs.wereselected for the study.
- Patients irrespective of sex,religion,occupation and chronicity were selected for the study.

Exclusion criteria

- Patients with *Upadravas* of *Grahani* were excluded.

- Patients suffering with other systemic diseases which interfere with the course of treatment were excluded from the study.
- Patients not fit for *Basti karma*.

Investigation

- Stool for occult blood and microscopic.
- T.C, D.C, ESR, Hb%, Blood sugar (If necessary)
- USG abdomen,
- Sigmoidoscopy/colonoscopy. (If necessary)

Research Design

- **Group-A:-** 15 patients were treated with *Takra Basti* and *Changeryadi ghrita Anuvasana Basti* in *Yoga Basti* pattern.
- **Group-B:-**15 patients were treated with *Erandamooladi Niruha Basti* and *Changeryadi ghrita Anuvasana Basti* in *Yoga Basti* pattern. There was a follow up on 16th day after the procedure.

Takra Basti

Poorvakarma

Sarvanga Abhyanga with *murchita tila taila* for 30 to 40 min & *Bhaspa sweda* upto *samyak swinna laxana*.(Sweating, Perspiration, subsiding of cold and pain, feeling softness.)

Preparation of Takra Basti (640ml Approx.)

In a round vessel take 300ml of fresh curd and add ½ part of water i.e 150ml was taken and churned it and fat is separated to prepare the *takra*. In a sizable *Khalva* 60gm honey was triturated well with 10gm *Saindhava Lavana*. To this mixture 130gm of *changeryadi ghrita* was added gradually and mixed thoroughly. After mixing 50gms of *Kalka* is added and stirred well. At last 400ml of *takra* was added and the whole mixture was stirred well utilizing churning stick until it became homogeneous. Prepared *Basti* was again filtered.

Pradhana karma

In this study *Takra basti* was administered in *Yoga Basti* course. Therefore, on 1st, 3rd, 5th, 7th, 8th, day *Anuvasana basti* with *Changeryadi ghrita* was given. And on 2nd, 4th, 6th, day *Takra Basti* as *Niruha basti* was given.

Paschat karma

Raise the legs, apply padding to the buttocks, massage the abdomen anticlockwise, and other traditional techniques. Up to the *Parihara kala* of 16 days, observe the *Asta maha doshakara varjya vishayas*.

Erandamooladi Niruha Basti

Poorvakarma

Sarvanga Abhyanga with *Murchita tila taila* for 30 to 40 min & *Bhaspa Sweda* upto *samyak swinna laxana*. (Sweating, Perspiration, subsiding of cold and pain, feeling softness.)

Preparation of Erandamooladi Niruha Basti (640ml Approximately)

200 gms of coarse powder of *Kwatha* drugs of *Erandamooladi Niruha Basti* was boiled with 1600 ml of water in a steel pot to reduce it by one fourth i.e.400ml. This is according to the scheme of *Sharangadhara*. The prepared *Kwatha* was filtered. In a sizable *Khalva* 60 gm honey was triturated well with 10 gm *Saindhava*. To this mixture 130gm of *Changeryadi ghrita* was added gradually and mixed thoroughly. After mixing 50gms of *Kalka* in it stirred well. At last, 400ml of *Erandamooladi kwatha* was added and the whole mixture was stirred well utilizing churning stick until it became homogeneous. Prepared *Basti* was again filtered.

Pradhana karma

In this study *Erandamooladi Niruha Basti* as *Yoga Basti* course. Therefore, on 1st, 3rd, 5th, 7th, 8th, day

Anuvasana Basti with *Changeryadi ghrita* was given. And on 2nd, 4th, 6th, day *Erandamooladi Niruha Basti* was given.

Paschat karma

Raise the legs, apply padding to the buttocks, massage the abdomen anticlockwise, and other traditional techniques. Up to the *Parihara kala* of 16 days, follow the *Asta maha doshakara varjya vishayas*.

Methodology

The changes observed in the signs and symptoms were assessed by adopting suitable scoring method and the objective signs by using appropriate clinical tools. The details of scoring pattern adopted for assessment of clinical signs and symptoms is as follows. Assessment was done before treatment, soon after the treatment and after 16days of the treatment.

Table 1: Scoring of Subjective and Objective parameters

Scoring	Parameters						
	Obstructed Stool (<i>Badda mala</i>)	Frequently passing Liquid Stool (<i>Muhurdrava Mala Pravruithi</i>)	Repeated passing of Stool (<i>Muhur Muhur Mala Pravruithi</i>)	Abdominal Discomfort (<i>Udara shoola</i>)	Sense of incomplete evacuation (Feeling of <i>Mala Badhata</i>)	Consistency (<i>Guruta</i>)	Mucous in stool (<i>Amayukta mala</i>)
0	Normal once daily	Normal once daily	Normal once daily	No abdominal pain	No sense of incomplete evacuation	Semisolid	No Visible mucous in stool
1	Alternative days	Twice daily	Twice daily	Occasional / rarely abdominal pain	Sense of incomplete evacuation till two motion	Solid	Visible mucous stucked to the stool
2	Once in two days	3-4 times daily	3-4 times daily	Intermittent lower abdominal pain, relived by passage of flatus & stool	Sense of incomplete evacuation till 3 to 4 motions	Very Hard with pellets	Passage of mucous with frequent stool
3	Once in three days	5-6 times daily	5-6 times daily	Continuous pain not relieved even after passage of flatus & stool	Sense of incomplete evacuation till 5 to 6 motions	Watery stools	Passage of large amount of mucous in stool
4	Once in four or more days	> 6 times daily	> 6 times daily		Sense of incomplete evacuation even after 6 motions		

Clinical observations

The patients were analyzed according to various factors like Age, Sex, Religion, Marital status, Education, Occupation, Socio-economic status, Diet, Addictions, *Prakruti*, *Agni*, and *Kosta* of 30 patients details of these observations are shown. Out of 30 patients, 11 patients were of age group ranging from 20-30 years & 31 - 40 years each, 4 patients in age group ranging from 41-50 years & 51-60 years each. Incidence of *Grahani* were maximum in male 19 patients as compared to female 11 patients. Among 30 patients 25 patients belong to Hindu community and 5 patients belong to Christian community. Among 30 patients incidence of *Grahani* were more in married 19 patients where as 11 patients were unmarried. Out of 30 patients, 3 patients were primary, 5 patients secondary, 15 patients were graduate and 7 patients were post graduate. Out of 30 patients, 6 patients were Students,

12 patients were doing service, 6 patients were doing business, 1 patient was doing agriculture and remaining 5 patients were House wives. Socio economic status in this study showed majority of patients belonged to middle class i.e 17 patients, 9 patients were of upper middle class, 3 patients were rich and 1 patient was poor. Among 30 patients 9 patients had vegetarian diet, while 21 patients had mixed diet. Among 30 patients 15 patients were having tea addictions, 8 patients were having smoking addiction, 7 patients were having alcohol addiction. In this study the dominance of *Vata-Pitta Prakruti* 19 patients, 5 patients were of *Pitta-Kapha Prakruti* and 6 patients belong to *Vata-kapha prakruti*. In the present study, out of 30 patients, 18 patients had *Vishama Agni*, 11 patients had *Manda Agni*, 1 patients had *Teekshna Agni*, In assessment of *kosta*, 16 patients had *Mruduakostha*, 5 patients had *Madhyama kostha* & 9 patients had *Krurakostha*.

Results

Group - A: Subjective parameters

Table 2: Showing the effect of Takra Basti on Subjective parameters

Sr.No	Parameters	B.T Mean±S.E	Assessment	A.T Mean±S.E	d.f	t'.value	p value	Remarks	Efficacy%
1	Baddamala	3.13±0.24	AT	1.87±0.22	14	10.72	P<0.01	H.S	40.42
			AF	0.6±0.13	14	13.2	P<0.01	H.S	80.85
2	Muhurdrava mala	2.87±0.16	AT	1.87±0.16	14	10.24	P<0.01	H.S	34.83
			AF	0.67±0.12	14	15.19	P<0.01	H.S	76.74
3	Muhur muhur mala	2.87±0.16	AT	1.93±0.2	14	7.89	P<0.01	H.S	32.55
			AF	0.67±0.19	14	15.19	P<0.01	H.S	76.74
4	Udara shula	1.87±0.09	AT	1.4±0.13	14	3.53	P<0.01	H.S	25.00
			AF	0.53±0.13	14	8.36	P<0.01	H.S	71.43
5	Sense of incomplete evacuation	2.4±0.13	AT	1.53±0.13	14	9.54	P<0.01	H.S	36.11
			AF	0.46±0.13	14	16.35	P<0.01	H.S	80.55

Statistical analysis of the results shown significant level of reduction in the intensity of all the subjective parameters like Badda mala, Muhur drava mala, Muhur muhur mala, Udara shula, Sense of incomplete evacuation after Takra Basti in treatment and follow up.

Group B: Subjective parameters

Table 3: Showing the effect of Erandamooladi Niruha Basti on Subjective parameters

Sr.No	Parameters	B.T Mean±S.E	Assessment	A.T Mean±S.E	d.f	t'.value	p value	Remarks	Efficacy%
1	Baddamala	3.2±0.22	AT	2.26±0.22	14	7.89	P<0.01	H.S	29.16
			AF	1.27±0.22	14	12.61	P<0.01	H.S	60.41
2	Muhurdrava mala	2.8±0.14	AT	0.75±0.19	14	7.48	P<0.01	H.S	28.57
			AF	1.27±0.22	14	11.5	P<0.01	H.S	54.76
3	Muhur muhur mala	2.93±0.15	AT	2.13±0.16	14	7.48	P<0.01	H.S	27.27
			AF	1.2±0.17	14	9.53	P<0.01	H.S	59.09
4	Udara shula	1.8±0.11	AT	1.47±0.13	14	2.64	P<0.01	H.S	18.52
			AF	1.07±0.15	14	4.78	P<0.01	H.S	40.74
5	Sense of incomplete evacuation	2.46±0.13	AT	1.8±0.17	14	5.3	P<0.01	H.S	27.03
			AF	1.07±0.23	14	8.57	P<0.01	H.S	56.76

Statistical analysis of the results shown significant level of reduction in the intensity of all the subjective parameters like Badda mala, Muhur drava mala, Muhur muhur mala, Udara shula, Sense of incomplete evacuation after Erandamooladi Niruha Basti in treatment and follow up.

Group A vs Group B - Subjective Parameters

Table 4: Showing the comparative effect of Takra Basti and Erandamooladi Niruha Basti on Subjective parameters

Sr. no	Parameters	Follow Up	Group A Mean±S.E	Group B Mean±S.E	d.f	t' value	p value	Remarks
1	Baddamala	Initial	3.13±0.24	3.2±0.22	28	0.20	-	N.S
		AT	1.87±0.22	2.27±0.23	28	1.27		N.S
		AF	0.6±0.13	1.27±0.23	28	2.53	P<0.05	S
2	Muhurdrava mala	Initial	2.87±0.16	2.8±0.14	28	0.30	-	N.S
		AT	1.87±0.16	2±0.19	28	0.52		N.S
		AF	0.67±0.12	1.27±0.23	28	2.3	P<0.05	S
3	Muhur muhur mala	Initial	2.87±0.16	2.93±0.15	28	0.29	-	N.S
		AT	1.93±0.21	2.13±0.16	28	0.75		N.S
		AF	0.67±0.19	1.2±0.17	28	2.08	P<0.05	S
4	Udara shula	Initial	1.87±0.09	1.8±0.11	28	0.47	-	N.S
		AT	1.4±0.13	1.47±0.13	28	0.35		N.S
		AF	0.53±0.13	1.07±0.15	28	2.62	P<0.05	S
5	Sense of incomplete evacuation	Initial	2.4±0.13	2.46±0.13	28	0.35	-	N.S
		AT	1.53±0.13	1.8±0.17	28	1.21		N.S
		AF	0.47±0.13	1.07±0.23	28	2.27	P<0.05	S

This shows the comparison in the results of both Group A & B in the reduction of severity of the subjective parameters is considered to be statistically significant after the follow up.

Group A: Objective Parameters

Table 5: Showing the effect of *Takra Basti* on Objective parameters

Sr.No	Parameters	B.T Mean±S.E	Assessment	A.T Mean±S.E	d.f	t'.value	p value	Remarks	Efficacy%
1	Consistency of stool	2.6±0.13	AT	1.6±0.19	14	5.91	P<0.01	H.S	38.46
			AF	2.6±0.13	14	12.91	P<0.01	H.S	82.05
2	Mucus in the stool	2.33±0.12	AT	1.53±0.19	14	7.48	P<0.01	H.S	34.28
			AF	0.4±0.13	14	29	P<0.01	H.S	82.85

Group B: Objective Parameters

Table 6: Showing the effect of *Erandamooladi Niruha Basti* on Objective parameters

Sr.No	Parameters	B.T Mean±S.E	Assessment	A.T Mean±S.E	d.f	t'.value	p value	Remarks	Efficacy%
1	Consistency of stool	2.73±0.11	AT	1.93±0.15	14	5.53	P<0.01	H.S	29.27
			AF	1.07±0.23	14	8.91	P<0.01	H.S	60.97
2	Mucus in the stool	2.4±0.13	AT	1.67±0.21	14	6.2	P<0.01	H.S	30.55
			AF	1±0.21	14	10.69	P<0.01	H.S	58.33

Group A vs Group B: Objective Parameters

Table 7: Showing the comparative effect of *Basti karma* on objective parameters

Sr.no	Parameters	Follow up	GROUP A Mean±S.E	GROUP B Mean±S.E	d.f	t'.value	p value	Remarks
1	Consistency of stool	Initial	2.6±0.13	2.73±0.12	28	0.76	-	N.S
		AT	1.6±0.19	1.93±0.15	28	1.36		N.S
		AF	0.47±0.13	1.07±0.23	28	2.27	P<0.05	S
2	Mucus in the stool	Initial	2.33±0.13	2.4±0.13	28	0.37	-	N.S
		AT	1.53±0.19	1.67±0.21	28	0.47		N.S
		AF	0.4±0.13	1±0.21	28	2.36	P<0.05	S

This shows the comparison in the results of both Group A & B in the reduction of intensity of the Objective parameters.

Overall result of the treatments

Table 8: Group A (Table showing the overall result of group A)

Sr.No	B.T Mean±S.E	Follow Up	A.T Mean±S.E	d.f	t'.value	p.value	Remarks	Efficacy%
1	18.07±0.67	AT	11.73±0.59	14	27.26	P<0.01	H.S	35.05
		AF	3.8±0.52	14	34.98	P<0.01	H.S	78.96

Table 9: Group B (Table showing the overall result of group B)

Sr.No	B.T Mean±S.E	Follow Up	A.T Mean±S.E	d.f	t'.value	p.value	Remarks	Efficacy%
1	18.33±0.67	AT	13.26±0.73	14	15.33	P<0.01	H.S	27.63
		AF	7.93±0.87	14	21.84	P<0.01	H.S	56.72

Table 10: Group A VS Group B (Table showing the Overall result)

Sr.No	B.T Mean±S.E	Follow Up	A.T Mean±S.E	d.f	t'.value	p.value	Remarks	Efficacy%
1	OVERALL	BT	18.07±0.13	18.33±0.66	28	0.28	-	N.S
		AT	11.73±0.6	13.27±0.73	28	1.62		N.S
		AF	3.8±0.52	7.9±0.87	28	4.08	P<0.01	H.S

Both the *Takra Basti* and *Erandamooladi Niruha Basti* found to be highly significant in all the subjective & the objective parameters taken for the study.

There is no significance seen in both group comparison soon after treatment but there is significant difference observed in both groups after follows up. Group A shows better result i.e 78.96% whereas Group B shows less results i.e 56.72%. So, from all the above assessments it can say that Group A is better than Group B.

Discussion

Discussion on Basti karma

- Action of *Basti* due to its unique procedure
- Action of *Basti* due to the drug used in the process.
- Action of *Basti* by *srotoshuddi* of the body
- Action of *Basti* by regulating ENS (enteric nervous system) and GUT BRAIN

Action of *Basti* due to its unique procedure

During *Basti* procedure patient is positioned in left lateral position. In this position the Anus (*guda*),

Large Intestine (*pakwashaya*) and Small Intestine (*Grahani*) was situated in the same side. It is known that absorption in the proximal colon is better than in the distal colon and Location of Digestive enzymes (*Agni adhistana*) is Duodenum (*Grahani*). In Duodenal disorder (*Grahani roga*). Digestive fire (*Agni*) is vitiated and the pathology is seen in Duodenum (*Grahani avayava*) which may correct the pathology of Duodenum (*Grahani avayava*).

According to *Parashara*, Anus (*guda*) is the Origin (*mulasthan*) of body. The Basti Material (*Basti Dravyas*) are given through Anus (*guda*) and are first absorbed through the Capillary (*raktavahinis*) and circulated throughout the body. The rectum has a rich blood and lymph supply and drug crosses the rectal mucosa the portion absorbed from the upper rectal mucosa is carried by the superior hemorrhoidal vein into the portal circulation where as that absorbed and inferior hemorrhoidal vein.

By the proper volume of the Basti Material (*Basti Dravyas*) it helps in producing the mechanical pressure so that Basti Material (*Basti Dravyas*) can go deep into the gastrointestinal tract and produces widespread effect and in turn useful in various motility disorders.

Action of Basti due to the drug used in the process

Takra is efficacious in Duodenum (*Grahani*) disorders due to Appetiser (*deepana*), holding of Stool (*grahi*), Lightness (*laghu guna*). Because of Sweet (*madhura vipaka*) it does not vitiates *Pitta*, is wholesome in *Kapha* due to Astringent (*kashaya rasa*), hot (*Ushna*), Roughness (*ruksha*), minuteness (*vikasi gunas*). And in *Vata* due to Sweet & Acidic in nature (*madhura, amla rasa*) and viscous (*Sandra guna*). *Changeryadi ghrita* possess Appetiser (*deepana*) digestion (*pachana*), holding of Stool (*grahi*) guna.

Erandamooladi Niruha Basti Dravyas possess properties like Appetiser (*deepana*) digestion (*pachana*), holding of Stool (*grahi*), Ant- parasitic (*krimigna*) and *vata*kaphahara in nature. Hence in another group *Erandamooladi Niruha Basti* is given in the management of Duodenum (*Grahani*)

Action of *Takra Basti* is possible by the Minuteness (*anupravarana*) of *Basti dravya* which contain unctuousness (*Sneha*) along with other paste material (*kalkadi dravyas*) and they move up to the minute channels of the body and tissue get nourished properly. Absorption from intestinal mucosa and later entering into systemic circulation can be described as Minuteness (*anupravarana*). *Jejjata* while commenting says that drugs (*Dravyas*) given by *Basti* will directly reach Duodenum (*Grahani*) without undergoing any changes.

Enema (*Basti*) is the main treatment of *vata dosha* and Large intestine (*Pakwashaya*) is the main seat of *vata dosha*. The *Takra Basti* and *Erandamooladi Niruha Basti* controls *Vata* located in large intestine (*pakwashayastita vata*) which in turn controls the other varieties of *vata*. The action of *Takra Basti* and *Erandamooladi Niruha Basti* is more on *samana vayu* and *apana vayu* because it has direct contact with their respective regions. It is observed that *samana vayu*

possess control over the other aspect of *vayu* as well as on other *doshas*. *Takra Basti* and *Erandamooladi Niruha Basti* eliminates the *doshas* by *anulomana* method and they are administered into the region of *Apana vayu*. Both *Apana vayu* and *samanavayu* are involved in Duodenal disorder (*Grahani roga*).

Action of Basti on srotoshuddhi of the body

Sushruta has explained that the drug used in *Basti karma* will however spread in the body from large intestine (*Pakwashaya*) due to their potency (*Veerya*) through their appropriate channels, in the same manner as water poured at the root of the tree circulates all over the tree by its own property. So *Basti karma* eliminates the morbid *doshas* and *dushyas* from the active body like *chavya*, *chitraka*, *ardraka*, *shringavera* provides *srotoshodaka* action.

Action of Basti regulating the ENS or GUT BRAIN

Samana vata and *Apana vata* are mainly vitiated in Duodenum (*Grahani*). Scared (*Bhaya*), worriedness (*chinta*), grief (*shoka*), Anger (*Krodha*) and sad (*dukha*) leads to vitiation of *Agni* and causes indigestion (*Ajeerna*). This indicates the importance of *manas* in *ahara pachanakriya*. The brain influences the Gut nervous system sending its signal when an individual experience stress there by aggravating the bowel system. Stress alters the intestinal motility and acute stress alters colonic motility activity. By giving *Takra Basti* and *Erandamooladi Niruha Basti*, *samana vata* was corrected and the digestive secretion and intestinal motility was brought back to normalcy.(16)

Discussion on results

Effect of therapies on subjective and objective parameters

Effect on muhur badda mala pravritti: Relief in *badda mala pravritti* was observed 80.85% among the patients of Group-A while the patients of Group-B showed 60.41% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on muhur drava mala pravritti: Relief in *drava mala pravritti* was observed 76.74% among the patients of Group-A while the patients of Group-B showed 54.76% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on muhur muhur mala pravritti: Relief in *muhur muhur mala pravritti* was observed 76.74% among the patients of Group-A while the patients of Group-B showed 59.09% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on udara shula: Relief abdominal pain was observed 71.43% among the patients of Group-A while the patients of Group-B showed 40.74% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on sense of incomplete evacuation of stool: Relief of sense of incomplete evacuation of stool was observed 80.85% among the patients of Group-A while the patients of Group-B showed 56.76% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on consistency of stool: Improvement in the consistency of stool was observed 82.05% among the patients of Group-A while the patients of Group-B showed 60.97% improvement. Both the results were statistically highly significant ($P < 0.01$).

Effect on presence of mucus in the stool: Relief in the mucus in the stool was observed 82.85% among the patients of Group-A while the patients of Group-B showed 58.83% improvement. Both the results were statistically highly significant ($P < 0.01$).

Overall effect of therapy

The overall effect of therapy in Group A was 78.96% and in Group B was 56.72%. showed highly significant results in all the parameters at the level as $P < 0.01$.

Conclusion

The examination of IBS in terms of *Ayurveda* comes to the conclusion that the condition is a cluster of symptoms that may be diagnosed as *Grahani Roga* and treated as such. When it comes to signs and symptoms like *Muhurbaddha-muhurdravam mala* (Episode of hard & loose stool), abdominal distention, and stool with mucus, the therapeutic procedures described in the classics are beneficial in providing considerable relief. *Takra Basti* is having more *pratyagamana kala* than *Eradamooladi Niruha Basti*. Both *Takra Basti* and *Eradamooladi Niruha Basti* Showed significant results in all the parameters. The efficacy of the treatment group A results was statistically significant of all parameters statistically even after follow up period compared to group B. The overall effect of therapy in Group A was 78.96% and in Group B was 56.72%. showed highly significant results in all the parameters at the level as $P < 0.01$. Hence it can be concluded that IBS can be treated in *Ayurveda* under the treatment principles of *Vataja Grahani*. Based on the results of this study, it can be said that the recommended course of therapy is helpful in reducing IBS symptoms and enhancing the patient's quality of life. Over the trial period, no medication side effects were observed.

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