

Evaluation of Nagaradya Churna in Grahani Roga

Pawan Kumar¹, O.P. Singh², Sanjay Kumar Tripathi³, Shweta Gyanendra Shukla⁴

1.MD 3rdYear, PG Department of Kaya Chikitsa, Rishikul Campus, Uttarakhand Ayurved University, Haridwar, Uttarakhand.

2.Prof. & Head, PG Department of Kaya Chikitsa, Rishikul Campus, Uttarakhand Ayurved University, Haridwar, Uttarakhand.

3.professor, PG Department of Kaya Chikitsa, Rishikul Campus, Uttarakhand Ayurved University, Haridwar, Uttarakhand.

4.Assistant professor, PG Department of Kaya Chikitsa, Rishikul Campus, Uttarakhand Ayurved University, Haridwar, Uttarakhand.

Submitted: 15-08-2022

Accepted: 31-08-2022

ABSTRACT

Objective: Grahani Roga is one of the diseases that we encounter on a daily basis in our OPD and IPD sections. In Ayurveda Grahani Roga is considered as a one among the eight MAHAGADAS and also one of the leading disorders of Annavaha Srotas. It is mentioned in classics that root cause of all the disease is Mandagni. Therefore, disturbance in function of Agni leads the disorder known as Grahani Roga. The drug Nagaradya Churna has contents of shunthi, Musta, Ateesh, Dhataki, Rasanjan, vatasak, Bilwa, patha, kutki having Deepana Pachana and Sangrahi properties which all are helpful to correct the Agni in Grahani Roga.

Methods: The study was conducted in Rishikul Ayurvedic Hospital among 20 patients. Data was obtained by assessing the subjective and objective parameters.

Results: On subjective assessment of patients- Statistically highly significant result found in subjective parameters like Muhurbaddham / Drava Mala Pravritti, Apakva Malappravritti, Udara Shoola, udara Gaurava, Vidaha, Ajeerna (P<0.001). Statistically significant result found in subjective parameters like Dourgandhita Malappravritti, Vishtambha, Aruchi, Alasya, as value of (P< 0.05) in each.

On objective assessment statistically highly, significant result was found in mucus in stool (P<0.001), frequency in stool (P<0.001) and no significant results in blood in stool (P<0.125) and ova cyst (P<0.125).

Keywords: Grahani Roga, Agni, Nagaradya Churna.

I. INTRODUCTION

As Grahani Roga is caused due to Agnimandya, the main line of treatment is to correct the Agni Dushti by administering drugs which are Deepana and Pachana in action and which corrects the intestinal motility. Correction of Agni is a key factor in treating Grahani Roga. For this, Ayurvedic texts emphasize on the use of Deepana drugs that potential the Agni and Pachana drugs that enhance the digestive power of the subject.

“सर्वथादीपनसर्वग्रहणीरोगिणांहितम्” I (सु.उ.४०/१८१)

Grahani Roga described in classical text of Ayurveda represents a group of disorders of gastrointestinal system. Malabsorption syndrome, Coeliac Sprue, Tropical Sprue, IBS, Ulcerative Colitis, Amoebiasis, Giardiasis mentioned in modern medicine may be considered under Grahani Roga.

Irritable bowel syndrome (IBS) is a functional bowel disorder characterized by abdominal pain or discomfort and altered bowel habits in the absence of detectable structural abnormalities.

Regarding prevalence of Grahani Roga, it is found that it affects 69% of population in India. And Amoebiasis is the third most common cause of death from the parasitic disease.

Dietetic variables, lifestyle factors, and psychological factors are the most important in determining the occurrence of Grahani Roga. Our civilization has changed dramatically in the last several decades; before to the computer and machine, human life involved a lot of physical work; with technological advances, living style has become sedentary and dietary habits have grown unhealthy. These dietary and lifestyle indiscretions

vitiate the Agni and the regular physiological function of Grahani. The healthy state of one imparts the normal physiological state of the other, and hence vice versa.

It's high time to seriously take up fruitful researches in disorders like Grahani Roga where Ayurveda can be a better option. Therefore, to get a better alternative an Ayurvedic medicine, the **Nagaradya Churna(Charaka Chikitsa)** was subjected to a clinical trial.

II. MATERIALS AND METHODS;

Aims and objectives-

- Evaluation of Nagaradya Churnain Grahani Roga

Type of study-

- Open randomised control trial

Selection Of Patients-Patients with clinical feature of the Grahani Roga attending the OPD of Kayachikitsa department of Pt. Mukundi Lal Dwivedi Ayurvedic Hospital, "Rishikul Campus" UAU, Haridwar, selected randomly for this clinical study, irrespective of sex, religion, occupation, etc. a detail Performa will be prepared on the basis of the Ayurvedic text and allied sciences. The patient fulfilling the inclusion and exclusion criteria registered on the Performa and scoring of the different clinical features will be done on the assessment criteria.

the Trial drug is Nagaradya Churna has been selected for study. It is described in Charaka Samhita Chikitsa Sthana in the chapter of Grahani dosha (15/129). The preparation has 09 drugs viz. Shunthi, Ativisha, Musta, Dhataki, Rasanjana, Vatsak, Bilwa, Patha, Kutki. All 09 constituents are in same quantity.

नगरातिविषेमुस्तंघातकीं च रसांजनम् |

वत्सकत्वक्फलविल्वंपाठाष्कटुरोहिणीम् || (च.चि.१५/१२९)

CONTENT

DRUG NAME	LATIN NAME	FAMILY	PART USED	PART
1. Shunthi	Zingiber officinale	Zingiberaceae	Kanda	1 part
2. Ativisha	Aconitum hetrophyllum	Ranunculaceae	Moola	1 part
3. Musta	Cyprus rotundus	Cyperaceae	Kanda	1 part
4. Dhataki	Woodfordia floribunda	Lytheraceae	Puspa	1 part
5. Rasanjana	Berberis aristata	Berberidaceae	Twak	1 part
6. Vatsak	Holarrhena antidysenterica	Apocynaceae	Beeja, twak	1 part
7. Bilwa	Aegle marmeloos	Rutaceae	Phala majja	1 part
8. Patha	Cissampelos pareria	Menispermiceae	Moola	1 part
9. Kutki	Picrorhiza kurroa	Scrophulariaceae	Kanda	1 part

PROPERTIES OF DRAVYAS OF "NAGARADYA CHURNA".

DRUG	RASA	GUNA	VIRYA	VIPAKA	DOSHA KARMA	PHARMA CO-LOGICAL ACTION	THERAPEUTIC USE
Shunthi	Katu	Laghu snigdha	Ushna	Madhura	Kapha vata Shamak	Carminative, Stimulant	Deepana, pachana, Triptighna, ruchya
Ativisha	Katu, Tikta	Laghu, Ruksha	Ushna	Katu	Kaph pitta shamak	Anti-inflammatory, Analgesics	Deepana, pachana, sangrahak
Musta	Tikta, katu, Kashay	Laghu, Ruksha	Shita	Katu	Kaph pitta shamak	Antiemetic, muscle relaxant,	Deepana, pachana, grahi, lekhana

	a					anti-Microbial, Diuretic	
Dhataki	Kashaya	Laghu, Ruksha	Shita	Katu	Kaph pitta shamak	Antibiotic, antiviral, antifungal, antipyretic	Sandhaniya, purishsangrahniya, mootravirajniya
Rasanjana	Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu	Kaphapitta shamak,	Antibacterial, antiCoagulant, antipyretic	Chedana, vednasthapana, shodhana, ropana
Vatsak	Tikta, katu Kashaya	Laghu Ruksha	Shita	Katu	Kaphapitta shamak	Antiamoebic, antiprotozoal	Deepana, grahi
Bilva	Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu	Vatakapha shamak	Antidiarrhoeal, anti-ulcer, anti-fungal	Deepana, pachana, Grahi
Patha	Katu	Laghu, tikshna	Ushna	Katu	Vatakapha Shamak	Antiperiodic, purgative properties, Diuretic	Pachaka, shool Prashamak
Kutki	Tikta	Laghu, Ruksha	Shita	Katu	KaphaPitta shamak	Antiperiodic, stomachic, laxative in large dose	Deepana, bhedana, Lekhana

INCLUSION CRITERIA

- Patients between the age group of 20-60yrs will be selected.
- Patients irrespective of sex, religion, occupation and chronicity will be selected for the study.
- Patients with symptoms of **Muhurbaddham-Muhurdrava Mala Pravritti, Muhur-Muhurmalpravritti, Ama-Malpravritti**, with or without other Lakshanas of Grahani Rogalike Praseka, Trishna, Arochaka, will be selected for the study.

EXCLUSION CRITERIA

- Patients suffering from any other systemic disorders like Hypothyroidism, Hyperthyroidism, Diabetes mellitus, Hypertension, Cardiac disease, renal dysfunction which interfere with the course of the disease and treatment will be excluded.
- Life threatening disease like abdominal Koch's, CA colon, and partial abdominal obstruction will be excluded.

- Patients with Upadrava of Grahani Roga like Gudabhramsha, Gudapaka, Gudashotha will be excluded.
- Patients with features such as severe anemia, rectal bleeding, and significant weight loss will be excluded.

Criteria for withdrawal -

1. Personal matter.
2. Aggravation of complaints.
3. Inter current illness.
4. Any other difficulties.
5. LAMA (patient leave against medical advice).

Criteria for assessment-

The assessment of the drug trial done on the basis of the following parameters.

- 1) Subjective
- 2) Objective

Subjective- The assessment of drug trial done on the basis of improvement in the following symptoms-

- 1.) Muhurbaddham Muhurdrava Malpravritti

- 2.) Apakva Malapravritti10.)Ajeerna
- 3.) Dourgandhita Malapravritti
- 4.) Udara Shoola
- 5.) Udara Gaurava
- 6.) Vishtambha
- 7.) Aruchi
- 8.) Alasya
- 9.) Vidaha

Stool examination

1. Frequency
2. Mucous
3. Routine and microscopic changes
4. Ova cyst

Grading for Subjective Parameter

The symptoms are graded as per their severity. The detail assessment of clinical sign and symptoms are discussed below:

2. **Objective:** The objective parameters will be accessed before and after treatment.

1. MuhurbaddhamMuhurdravaMalapravritti

Grade	Effect
0	Passing of normal consistency stool (1 time/day).
1	Passing stool (2-3 times/day) with irregular consistency, without pain.
2	Passing stool (4-5 times/day) with irregular consistency, without pain.
3	Passing stool (5-8 times/day) with irregular consistency and occasional pain.
4	Passing stool (>10 times/day) with irregular consistency and occasional to regular pain.

2. Udara Shoola

Grade	Effect
0	No pain,
1	Occasional pain
2	1 to 2 days/week,
3	3 to 4 days/week,
4	5to 6 days/week

3. Udara Gaurav

Grade	Effect
0	No Gaurav
1	Occasionally feeling of abdominal heaviness after taking heavy food,
2	Daily after intake of heavy food,
3	Heaviness of abdomen after intake of normal food,
4	Heaviness of abdomen even after easily digestible food,

4. Aruchi

Grade	Effect
0	Normal desire for food,
1	Desire for food at least twice in a day
2	Desire for food at least once in a day
3	No desire even for favorite dish
4	Aversion for any kind of food

5. Vidaha

Grade	Effect
0	No Vidaha,
1	Occasionally 1-2 time after taking spicy food
2	3-4 times in week after taking spicy food
3	Burning all the time even after normal food,
4	Burning all the time even after normal light food.

6. Aalasya

Grade	Effect
0	No laziness,
1	Refuses for any hard-physical work,
2	Refuse to moderate physical work,
3	Refuse even for mild physical work,
4	No desire even for routine activities.

7. Vishtambha

Grade	Effect
0	No Vishtambha
1	Feeling of incomplete evacuation 1-2 days in a week,
2	Feeling of incomplete evacuation 3-4 days in a week,
3	Feeling of incomplete evacuation 5-6 days in a week,
4	Feeling of incomplete evacuation daily.

8. Ajeerna

Grade	Effect
0	Can be able to digest even heavy food,
1	Occasionally prolonged food digestion period after heavy meals,
2	Occasionally prolonged food digestion even after taking normal diet,
3	Consistently prolonged food digestion period even after taking normal diet.
4	Consistently prolonged food digestion period even after taking light food.

9. Dourgandhita mala Pravritti

Grade	Effect
0	No foul smell in stool
1	Passing of foul-smelling stool 1-2 times in week,
2	Passing of foul-smelling stool 3-5 times in week,
3	Passing of persistently foul-smelling stool.

10. Apakva mala Pravritti

Grade	Effect
0	Normal stool consistency and odour,
1	Occasionally sticky stool with foul smell
2	Sticky stool with occasionally foul smell
3	Consistently sticky and foul-smelling stool

Grading for objective parameters

1- Frequency of stool

Grade	Effect
0	Normal stool
1	More than two times/day
2	More than five times/day
3	More than ten times/day

2- Mucous in stool

Grade	Effect
0	Absent
1	Present

3- Blood in stool

Grade	Effect
0	Absent
1	Present

4- Ova-cyst

Grade	Effect
0	Absent
1	Present

STATISTICAL ANALYSIS-

On comparison of subjective criteria before and after treatment with a group Wilcoxon's test and paired t-test will be applied in objective criteria.

Thus, the obtained results were interpreted as:

P> 0.05 Not Significant

P< 0.01 & <0.05 significant

P< 0.001 highly significant.

ASSESSMENT OF OVERALL EFFECT OF THE THERAPY

Percentage of improvement of individual patient was calculated as shown below:

All the B.T. score of the above mentioned subjective & objective parameters of the patient were added.

All the A.T. score of the above mentioned subjective & objective parameters of the patient were added.

Overall percentage improvement of each patient was calculated by the following formula:

$$\frac{\text{Total BT}-\text{Total AT} \times 100}{\text{BT}}$$

BT

OVER ALL ASSESSMENT OF THERAPY

The result thus obtained from individual patient was categorized according to the following grades:

Complete remission :100%relief

Marked improvement :≥75%reliefto99%relief

Moderate improvement :≥50%upto75%relief

Mild improvement :≥25%upto50%relief

Noimprovement :<25%relief

SIGNS & SYMPTOMS OF 20 PATIENTS OF Grahani Roga

SIGN & SYMPTOMS	Group A	Percentage
Muhurbaddham/ Drava Mala Pravritti	20	100%
Udara Shoola	15	72.5%
Udara Gaurava	20	97.5%
Aruchi	11	57.5%
Vidaha	11	35.0%
Alasya	19	80.0%
Vishtambha	20	100%
Ajeerna	20	100%
Dourgandhita Mala Pravritti	12	75.0%

Apakva Mala Pravritti	20	100%
-----------------------	----	------

EFFICACY OF NAGARADYA CHURNA IN SYMPTOMS OF GRAHANI ROGA

Group A	Mean		Median		SD		Wilcoxon W	P-Value	% Relief	Result
	BT	AT	BT	AT	BT	AT				
Muhurbaddham Muhurdrava mala Pravritti	2.15	0.25	2.00	0.00	0.67	0.44	-4.030 ^b	0.000056	88.37	HS
Apakva Malapravritti	2.45	0.35	3.00	0.00	0.76	0.49	-3.800 ^b	0.000144	85.71	HS
Dourgandhita Malapravritti	1.60	0.20	1.00	0.00	1.35	0.41	-3.228 ^b	0.01245	87.50	Sig
Udara Shoola	1.75	0.15	1.00	0.00	1.37	0.37	-3.695 ^b	0.000220	91.43	HS
Udara Gaurava	2.70	0.55	2.50	1.00	1.22	0.51	-3.649 ^b	0.000263	79.63	HS
Vishtambha	3.65	0.85	4.00	1.00	0.75	0.49	-4.055 ^b	0.01501	76.71	Sig
Aruchi	1.40	0.25	1.00	0.00	1.50	0.55	-3.108 ^b	0.01886	82.14	Sig
Alasya	3.55	0.75	4.00	1.00	1.23	0.55	-3.862 ^b	0.01112	78.87	Sig
Vidaha	1.75	0.15	2.00	0.00	1.33	0.37	-3.555 ^b	0.000378	91.43	HS
Ajeerna	2.60	0.45	3.00	0.00	1.19	0.51	-3.964 ^b	0.000074	82.69	HS

Since observations are on ordinal scale (gradations), Wilcoxon Signed Rank Testis carried out totest efficacy in Group A. From above table, we can observe that,P-Value for some parameters

isless than 0.001 and some parameters is less than 0.05.Hence, we can conclude that, effect observed in Group A is highly significant and significant.

EFFICACY OF NAGARADYA CHURNA IN OBJECTIVE PARAMETERS OF GRAHANI ROGA

Group A	Mean		Median		SD		t-Value	P-Value	% Relief	Result
	BT	AT	BT	AT	BT	AT				
Frequency of Stool	1.90	0.25	2.00	0.00	0.45	0.44	-6.072	0.000017	86.84	HS
Mucus in Stool	0.80	0.00	1.00	0.00	0.41	0.00	-6.000	0.000013	100.00	HS
Blood in Stool	0.00	0.00	0.00	0.00	0.00	0.00	.000 ^c	1.000000	0.00	NS
Ova cyst	0.05	0.00	0.00	0.00	0.22	0.00	-1.000 ^b	0.317311	0.00	NS

Paired t-Test is carried out to test efficacy in Group A. From above table, we can observe that, P-Value for frequency of stool and mucus in stool is less than 0.001. Hence, we can conclude that, effect observed in Group A is highly significant. Blood in stool and ova cyst was absent in maximum patients.so non-significant result found.

having complain of Muhurbaddham Muhurdrava mala Pravritti, 72.5% of patient were having Udarshool, 97.5% of Udara Gaurava, 57.5% of Aruchi, 35% of Vidaha, 80% of Alasya, 100% of Vishtambha, 100% of Gatrashola,75% of Dourgandhita Mala Pravritti,100% of Apakva Mala Pravritti were seen.

III. DISCUSSION-

In this study, As per subjective criteria, among the total 20 cases, 100% of patient were

Effect of Treatment-

Following results are obtained while observing subjective and objective criteria-

GROUP A: Statistically highly significant result found in subjective parameters like Muhurbaddham / Drava Mala Pravritti, Apakva Malapravritti, Udara Shoola, udara Gaurava, Vidaha, Ajeerna ($P < 0.001$).

- Statistically significant result found in subjective parameters like Dourgandhita Malapravritti, Vishtambha, Aruchi, Alasya, as value of ($P < 0.05$) in each.

- **The percentage relief in all the subjective parameters is as follow-**

Muhurbaddham 88.37%, Apakva Malapravritti- 85.71%, Udara Shoola-91.43%, Ajeerna-82.69%, Vishtambha-76.71%, Dourgandhita Malapravritti- 87.50%, Udara Gourava-79.63%, Aruchi- 82.14%, Vidaha- 91.43% and Alasya- 78.87%.

- we can observe that, P-Value for frequency of stool and mucus in stool is less than 0.001. Hence, we can conclude that, effect observed in Group A is highly significant.

Blood in stool and ova cyst is greater than 0.05 p-value in maximum patients and non-significant result found.

- **The percentage relief in all the objective parameters is as follow-** Frequency of Stool- **86.84%**, mucous in Stool- **100%**, (**0%**) relief in blood in Stool, ova cyst.

PROBABLE MODE OF ACTION OF DRUGS

The mode of action of selected drug Nagaradya Churna can be explained as follows-

Nagaradya Churna: A trial drug Nagaradya Churna described by Acharya Charakain Grahani Chikitsa Adhyaya is an herbal preparation. It has 09 contents namely **Shunthi, Ativisha, Musta, Dhataki, Rasanjana, Vatsak, Bilwa, Patha, Kutki.**

- Shunthi have Katu Rasa, Madhura Vipaka, and Ushana Virya and Deepana and Pachana properties. Ativisha have Tikta, Katu Rasa, Ushana Virya, and Katu Vipaka and Deepana, Pachana, Grahi, properties. Ativisha have Tikta, Katu Rasa, Ushana Virya, and Katu Vipaka and Deepana, Pachana, Grahi, properties. Dhataki has Kashaya rasa, Shita Virya, Katu Vipaka, and Sandhaniya, Purisasangrahaniya properties. Rasanjana have Tikta, Kashaya, Rasa, Ushana Virya and Katu Vipaka, and vedna sthapana, Shodhana Properties. Vatsak have Tikta, Katu, Kashaya Rasa, and Shita Virya, and Katu Vipaka and Deepana, Grahi properties. Bilwa have Tikta, Kashaya Rasa and Ushana Virya and Katu Vipaka and Deepana,

Pachana, Grahi properties. Patha have Katu Rasa and Ushana Virya and Katu Vipaka and Pachana and Shoolprashamak properties. Kutki have Tikta Rasa and Shita Virya and Katu Vipaka and Deepana Pachana properties.

- Shunthi, Bilva and Patha these drugs are Vata kaphashamak. Ativisha, Musta, Dhataki, Rasanjana, Vatsak and Kutki are Pittakapha shamak drugs. All the contents of Nagaradya Churna are having Tridosha-Shamaka properties.

- Most of the drugs have Deepana- Pachana, property which directly acts on Agni; thus, it leads to increase in Jatharagni and Dhatvagni. Increased Dhatvagni stop the process of vitiation of Rasa Dhatu (Aahara Rasa) which are the Dushyas of Grahani Roga. Some of the drugs have Grahi, Sandhaniya, Purisasangrahaniya, Shodhana, Ropana properties which are essential to treat Rasa Dushti.

- The main cause of the disease Grahani Roga is Mandagni. Which leads to the production of Ama. Deepana- Pachana property of most of the drugs correct the Mandagni and breaks the pathogenesis of Grahani Roga. It also has Amapachaka property. Hence it promotes Jatharagni and as a result Jatharagni is attained.

- Most of the drugs like Kutki, Vatsak, Musta, Patha possess Laghu- Ruksha Guna and Tikta- Katu- Kashaya Rasa which purifies the Srotas through their Sroto-shodhaka properties.

- All the contents of Nagaradya Churna have anti-inflammatory, anti-diarrheal, antispasmodic, anti-oxidant, and analgesic activity, regulates gut motility and immunomodulatory effect.

As a whole the combined action of Nagaradya Churna can be summarized as Vata-Pitta-Kapha Shamaka, Grahi, Agni Deepana, and Amapachaka. Thus, the drug was effective in breaking the pathogenesis of Grahani Roga.

IV. CONCLUSION

- Kayagni is the leader of all factors concerned with digestion and metabolism in the living body. All the factors are derived from it.

- If Agni will destroy, the Purusha will die. Vitiation of Agni leads to disease and Samagni state leads to health condition. The root cause of Bala, Varna etc. is due to Agni.

- 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 NiramaAvastha.

- Small intestine (along with pyloric sphincter and ileo-caecal sphincter) can be anatomically and physiologically considered as Grahani. But the duodenum, part of Grahani is found to be most functional and controlling part of Grahani.
- 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 Ghatatva (may be structural derangement) then it could be called as Grahani Roga.
- Improper dietary habits and stressful life style 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 Nagaradya Churna with Takra works more effectively on chief symptoms of Grahani Roga than Roasted wheat flour capsule with Takra.
- During follow up of 15 days period it was found that there was relapse of few symptoms with less intensity.
- No any hazardous effects have been reported by the patients during the study or in follow up. This is very important in acceptance of Ayurveda, worldwide.

18th edition, Vol.2, The McGraw-Hill; page no.1882.

- [6]. Dr. Pushpa markam, A Review of etiopathology of Grahani Roga and management according to Ayurveda. Pg. scholar 2018, post graduate dept. of rognidan evum vikriti vigyan, Govt. ayurvedic college Raipur, Chhattishgarh. and published on website- www.wjpmr.com.
- [7]. Agnivesha, Charaka, Dridhbala, Charaka Samhita, Chikitsa Sthana, Grahani Chikitsa
- [8]. Adhyaya 15th chapter 130,131 Shloka, page no. 471 Vidyotini Hindi commentary by Kashinath Shastri and Gorakhnath Chaturvedi, 16th edition, Chaukhambha Bharti academy (2004).
- [9]. Acharya Priyavata Sharma, Dravya Guna Part II.

ACKNOWLEDGEMENT-

The author offers sincere thanks to the guide Dr. Shweta Gyanendra Shukla and co- guides Dr. OM Prakash Singh and Dr. Jaya Saklani Kala for providing support and guidance. I also want to thanks to the patients for their co-operation in this study.

REFERENCES

- [1]. Agnivesha, Charaka, Dridhbala, Charaka Samhita, Chikitsa Sthana, Grahani Chikitsa
- [2]. Adhyaya 15th chapter 75 Shloka, page no. 464, Vidyotini Hindi commentary by Kashinath Shastri and Gorakhnath Chaturvedi, 16th edition, Chaukhambha Bharti academy (2004).
- [3]. Sushruta: Sushruta Samhita, Uttara Sthana Atisara Pratishedh Adhyaya 40th chapter 181th
- [4]. Shloka page no. 307, Chaukhambha Sanskrit Sansthan, Varanasi, reprint (2011).
- [5]. Harrison, Longo, Fauci, Kasper et al. Harrison's principles of internal medicine,