

## Efficacy Of Shriphalshalatu Yog In The Management Of Sangrahani (Irritable Bowel Syndrome)

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### ABSTRACT

**Background:** Sangrahani is considered an Annava Srotodushtjanya Vyadhi,(1) primarily caused by impaired Jatharagni & the formation of Ama.(2) In modern medicine, Irritable Bowel Syndrome is described as a physiological gastrointestinal disorder marked by recurrent abdominal pain or discomfort, accompanied by changes in bowel habits, in the absence of any identifiable structural abnormalities.(3) Grahani is classified under NAMC Code ICD-601 EB-7, while Sangrahani is ICD-608 EB-7.7.(4) According to WHO, the ICD code for IBS is K58. Shriphalshalatu Yog, described in Bhaishajyaratnavali, is advised for managing all types of Grahani.(5)

**Aim-** To study the efficacy of Shriphalshalatu Yog in the management of Sangrahani (Irritable Bowel Syndrome).

#### Objectives-

1. To prepare Shriphalshalatu Yog.
2. To check adverse effects of Shriphalshalatu Yog if any.
3. To assess effect of Shriphalshalatu Yog in reduction of Drava, Snigdha, Pichila Mala Pravritti.

**Methodology** - A single-arm, open-label clinical trial was conducted on 35 patients diagnosed with Sangrahani, based on Ayurvedic criteria and modern tools including IBS-SSS, Bristol Stool Scale, and VAS. Patients received Shriphalshalatu Yog 6 g twice daily for 28 days, with follow-ups on the 7th, 14th, 21st & 28th days. Data was analyzed using Wilcoxon Signed-Rank Test.

**Results** - The formulation showed marked efficacy, with 84.73% reduction in the primary symptom (Drava, Snigdha, Pichila Mala Pravritti) ( $p = 0.000, <0.05$ ). Subjective parameters improved by 79.96% and objective parameters by 66.01%, both statistically significant. No adverse effects were observed.

**Conclusion** - Shriphalshalatu Yog demonstrated significant improvement in Sangrahani due to its Deepana, Pachana, Sangrahi, Tridosahara & Amapachaka properties,(6,7) enhancing Agni & reducing Ama. It was safe, cost-effective and well tolerated. Larger studies are recommended to strengthen these findings.

**KEYWORDS:** Shriphalshalatu Yog, Sangrahani, Case report.

Abbreviations: IBS (Irritable Bowel Syndrome), IBS-SSS (Irritable Bowel Syndrome Severity Scoring System), VAS (Visual Analog Scale), B.T (Before treatment), A.T (After treatment).

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### INTRODUCTION

*Sangrahani* is one of the types of *Grahani* disorder described in *Madhav Nidan and Yog Ratnakar*.(8,9) *Sangrahani* is caused due to physiological disturbances in the *Grahani* organ primarily impairing its key roles such as intestinal motility, enzymatic digestion, assimilation, absorption, and elimination, without any structural abnormalities. *Sangrahani* shares clinical similarities with Irritable Bowel Syndrome,(10) a functional gastrointestinal disorder characterized by recurrent mild abdominal pain, altered bowel habits and form (constipation dominant, diarrhoea dominant or mixed), bloating and flatulence, sense of incomplete evacuation, upper gastrointestinal symptoms like nausea, recurrent acidity, dyspepsia, etc.(3) While conventional treatments like intake of stool-bulking agents, anti-spasmodics, antidiarrheal agents, antidepressant drugs, antibiotics, pre and probiotics provide

symptomatic relief but they often have side effects and fail to prevent recurrence. The importance of alternative treatments is increasing, and Ayurveda offers a promising solution with herbal formulations like *Shriphalshalatu Yog*. This case study explores the effectiveness of *Shriphalshalatu Yog*, an Ayurvedic formulation containing *Bilva (Aegle marmelos)*, *Shunthi (Zingiber officinalis)* and *Purana Guda (Jaggery)* in managing *Sangrahani*.

## MATERIAL & METHODS-

**Material-** The patient selection was carried out on the basis of the classical signs and symptoms of *Sangrahani* as described in Ayurvedic literature. Additionally, individuals with an active score ranging from 75 to 299 on the Irritable Bowel Syndrome Severity Scoring System were included to fulfill the defined inclusion criteria. Recruitment was conducted through the Outpatient (OPD) and Inpatient (IPD) units of the Kayachikitsa Department at Bharati Vidyapeeth (Deemed to Be University) College of Ayurveda and Hospital, Pune. Considering the prevalence of *Sangrahani* cases observed in the hospital's OPD and IPD, the total sample size was determined to be 35 patients.

**Drugs-** *Shriphalshalatu Yog*, a classical Ayurvedic formulation consisting of *Shriphal/Bilva Churna*, *Shunthi Churna* & *Purana Guda*, was used as the therapeutic intervention in this study. To ensure authenticity and high quality, all natural ingredients were procured from GMP-certified pharmacies. The process of authentication and standardization was carried out in accordance with Ayurvedic Pharmacopeial standards.

**Standardizations of Drug-** In order to ensure uniformity and therapeutic effectiveness, *Shriphalshalatu Yog* was prepared in accordance with standard operating procedure (SOP).

**Method of preparation-** Ingredients: 3 grams total mixture of *Bilva Churna* and *Shunthi Churna* was taken in equal proportion (1.5 grams of *Bilva Churna* + 1.5 grams of *Shunthi Churna*) along with *Puran Guda* in equal proportion of *Churna(11)* i.e 3 grams. Total 6 grams of dose was administered at a time.

This preparatory technique of *Yog* along with doses was explained to patients in writing using simple, local language.

### Methodology-

- a) **Screening and Selection of Patients** – Patients were evaluated according to:
  - Classical Ayurvedic signs and symptoms of *Sangrahani*.
  - Symptom severity assessed using tools such as the IBS Severity Scoring System, Bristol Stool Scale, and Visual Analog Scale (VAS).
 Enrollment was restricted to those fulfilling the inclusion criteria and giving informed consent.
- b) **Inclusive & Exclusion Criteria** –

#### Inclusion criteria-

1. Patients of age between 18-60 years of both sexes.
2. Patients having classical signs and symptoms of *Sangrahani* like Antrakujan, Alasya, Daurbalya, Sadana, Drava, Ghana, Snigdha, Pichila Mala Pravritti, Ama Mala Pravritti Sakati Vedanam Shakrita, Sashabda Mala Pravritti, Manda Vedanayukta Mala Pravritti, Pakshat, Maasat, Dashat Va Nityam Mala Vega Prakop, Diva Prakopo Bhavati Ratrou Shaanti Vrajat.
3. Diagnosis as per Rome Criteria III(12) with active Irritable Bowel Syndrome symptoms as indicated by a score between (75 - 299 on IBS SEVERITY SCORING SYSTEM). (13)

#### Exclusion criteria-

1. More than 3 years chronicity of *Sangrahani*.
  2. Laboratory or imaging evidence of an alternative explanation of symptoms.
  3. Known cases of active PR bleed and GI disease such as Ulcerative colitis, Crohn's disease, Amoebiasis, Celiac disease.
  4. History of Colon Resection, Abdominal Surgery. Uncontrolled systemic diseases like DM I & II, Hypothyroidism, Hyperthyroidism, IHD, etc. other Congenital and Genetic Disorders, Alcoholic patients.
  5. Immunocompromised individuals or subjects on immunosuppressive drugs.
  6. Pregnant women and lactating mothers.
- c) **Consent:** Prior to starting the intervention, written informed consent was acquired from each participant. The consent procedure explains about the goals, methods, and possible dangers or advantages of the study.
  - d) **Intervention** – The study intervention involved the administration of *Shriphalshalatu Yog* as follows:

Parameter	Details
Number of Patients	35
Medicine	<i>Shriphalshalatu Yog</i>

<b>Dose</b>	6 grams [3 grams (Bilva Churna + Shunthi Churna) + 3 grams Puran Guda] twice a day
<b>Timing (Kala)</b>	Vyan, Udan Kala (After lunch and after dinner)
<b>Route of Administration</b>	Oral
<b>Adjunct (Anupana)</b>	Lukewarm water after Yog
<b>Treatment Period</b>	28 Days
<b>Follow-Up Days</b>	7th, 14th, 21st and 28th day

**Study Design-** Single-arm, open-label clinical trial

### ASSESSMENT PARAMETERS-

**Subjective parameters:(8)**

1. *Alasya* (Lassitude)(14) SAT-D.914(4)

No <i>Alasya</i> (doing satisfactory work with proper vigor & in time)	Grade 0
Doing satisfactory work/late initiation, like to stand in comparison to walk	Grade 1
Doing little work very slow, like to sit in comparison to stand	Grade 2
Don't want to do work/no initiation, like to lie down in comparison to sit	Grade 3

2. *Daurbalya* (Weakness)(14) SAT-D.4060(4)

Can do routine exercise/work	Grade 0
Can do moderate exercise with hesitancy	Grade 1
Can do mild exercise only, with difficulty	Grade 2
Can not do mild exercise too	Grade 3

3. *Drava, Ghana, Snigdha, Pichila Mala Pravritti* (Liquid, Dense, Unctuous, Bulky and Mucoid Stools containing undigested food matter) *Mala pravritti* – consistency of stools: (14)

Samhata pureesha (well formed – solid), doesn't change the shape on the closet basin, includes Sandra	Grade 0
Asamhatam / shithilam / Shlatham (improperly formed – semisolid), changes shape but do not spread on the closet basin, includes Apichilam, <b>Snigdham</b>	Grade 1
Srusta pureesham, Sramsa, Bhinna, Bhramsha (Semi liquid), takes the shape of the closet, adequate faeces present, includes Kaphadhikam, Phenilam, <b>Picchanugatam</b> , Tantumat	Grade 2
<b>Dravam</b> / Tanu (liquid stool), watery spills throughout the closet basin, includes, Jalopamam, Payabham, Ambutulyam, Udakaiva, Apureesham, Vitvarjitham	Grade 3

4. *Pakshat, Maasat, Dashat va Nityam Mala Vega Prakop* (Episodes of *Grahani* occur at an interval of Fortnight, Month, Ten days or may even occur Daily)

Episodes of <i>Grahani</i> occur at an interval of 30 days	Grade 0
Episodes of <i>Grahani</i> occur at an interval of 15 days	Grade 1
Episodes of <i>Grahani</i> occur at an interval of 10 days	Grade 2
Episodes of <i>Grahani</i> occur Daily	Grade 3

Sr. No.	Symptoms	Parameter	Grade
1	Antrakujan (Intestinal gurgling)(14) SAT-D.65(4)	Absent Present	0 1
2	Sadana (Tiredness/Fatigue) SAT-D.824(4)	Absent Present	0 1

3	Ama Mala Pravritti (Stools with undigested food matter) SAT-D.131(4)	Absent Present	0 1
4	Sashabda Mala Pravritti (Production of sounds during passage of stools)	Absent Present	0 1
5	Diva Prakopa Bhavati Ratrou Shaanti Vrajat (The condition aggravates during the day time and subsides in the night)	Absent Present	0 1

**Objective parameters:**

1) Irritable Bowel Syndrome- Severity Scoring System(13) Results will be assessed by using IBS severity scoring system (IBS - SSS) on every follow up till last day– 28.

IBS - SSS is a five item questionnaire measuring different symptoms scoring from 0 to 500. The following widely used we cut off IBS-SSS score to evaluate the severity of IBS.

- Abdominal Pain Severity - 0 to 100
- Abdominal Pain Frequency - 0 to 100
- Abdominal Distension severity - 0 to 100
- Bowel Habit Dissatisfaction - 0 to 100
- Interference with Quality of Life - 0 to 100

- MILD - 75 TO 174
- MODERATE - 175 TO 299
- SEVERE - 300 OR MORE

**IBS Severity Score**

Place an X anywhere on the line between 0 and 100 to indicate as accurately as possible the severity of your symptoms.

**How severe is your pain?**

0 |-----| 100  
 No pain      Not very severe      Quite severe      Severe      Very severe

**If currently in pain, how severe is your abdominal pain?**

0 |-----| 100  
 No pain      Not very severe      Quite severe      Severe      Very severe

**If you currently have abdominal distention, how severe is it?**

0 |-----| 100  
 No distention      Not very severe      Quite severe      Severe      Very severe

**How satisfied are you with your bowel habits?**

0 |-----| 100  
 Very happy      Quite happy      Unhappy      Very unhappy

**How much does your IBS affect or interfere with your life in general?**

0 |-----| 100  
 Not at all      Not much      Quite a lot      Completely

NOTE: Each of the five questions generates a score from 0 to 100 points, with a maximum total score of 500 points. Mild IBS = 75 to 174 points; moderate IBS = 175 to 299 points; and severe IBS = 300 points or more.

2) Bristol Stool Scale(12)

Used to evaluate the effectiveness of treatment of various bowel disease.

The seven types of stools are :-

- Type 1 - Separate hard lumps, like nuts (difficult to pass and can be black)
- Type 2 - Sausage-shaped, but lumpy.
- Type 3 - Like a sausage but with cracks on its surface
- Type 4 - Like a sausage or snake, smooth and soft (average stool)
- Type 5 - Soft blobs with clear cut edges.
- Type 6 - Fluffy pieces with ragged edges, a mushy stool (diarrhoea)
- Type 7 - Watery, no solid pieces, entirely liquid (diarrhoea)

Type 1 and 2 indicate constipation, with 3 and 4 being the ideal stools as they are easy to defecate while not containing excess liquid, 5 indicating lack of dietary fibre and 6 and 7 indicate diarrhoea.

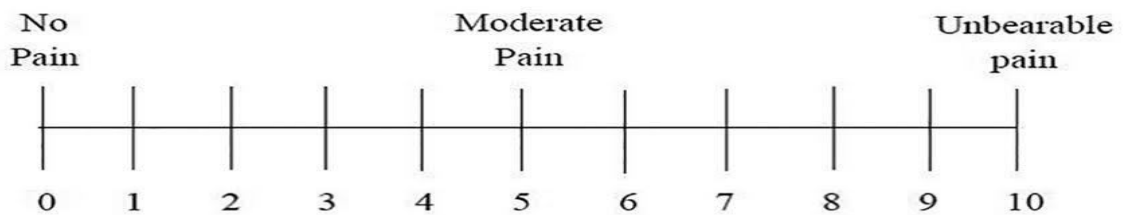
3) VAS Scale [ Visual Analogue Scale] (Ref- Hayes Patterson 1921) Visual Analogue Scale will be used for assessing pain of following two symptoms:

Bristol Stool Chart		
Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

*Sakati Vedana Shakrita* (Pain in lower back during passage of stools)

*Manda Vedana Yukta Mala Pravritti* (Mild pain in abdomen during passage of stools)

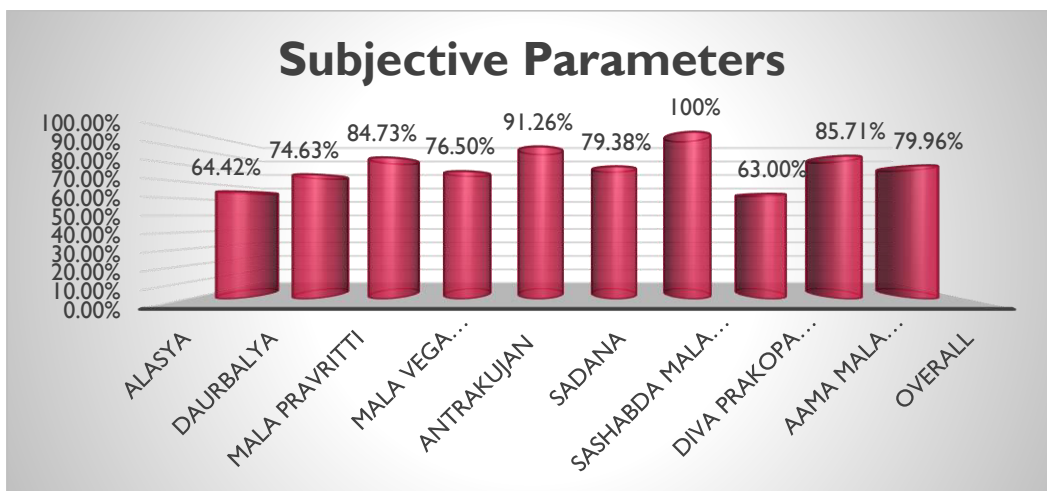
#### 0-10 Vas Numeric Pain Distress Scale



#### Statistical Analysis

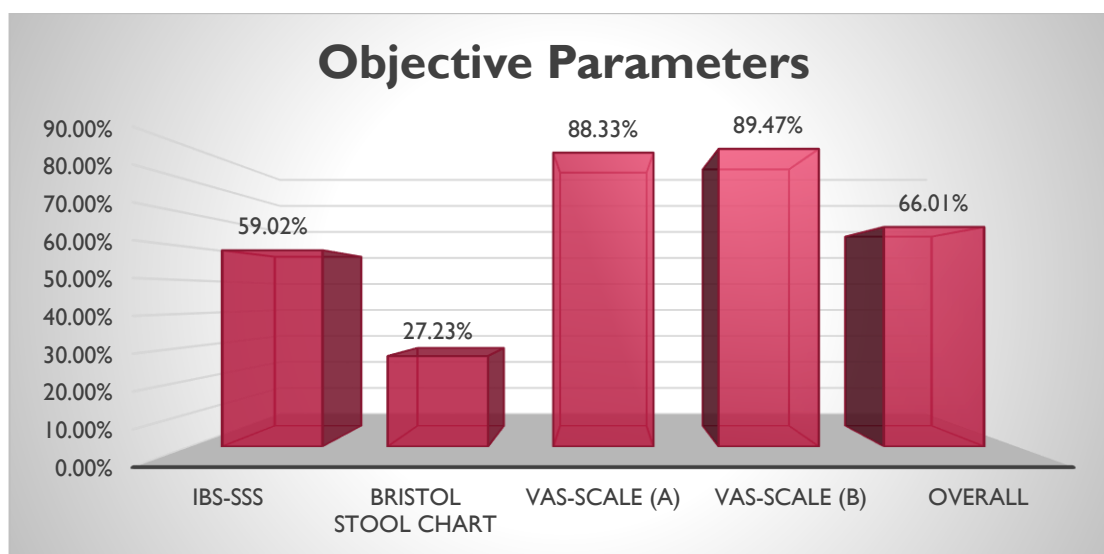
Appropriate statistical technique was used to assess the results. The Wilcoxon Signed Rank Test was used to evaluate all the subjective and objective parameters.

#### STATISTICAL OBSERVATIONS



Graph no. : Showing Effects of Shriphalshalatu Yog on Overall Improvement In Subjective Parameters

Subjective Parameters	Percentage Change
<i>Antrakujan</i>	91.26%
<i>Alasya</i>	64.42%
<i>Daurbalya</i>	74.63%
<i>Drava, Ghana, Snigdha, Picchila Mala Pravritti</i>	84.73%
<i>Pakshat, Maasat, Dashat va Nityam Mala Vega Prakop</i>	76.50%
<i>Sadana</i>	79.38%
<i>Sashabda Mala Pravritti</i>	100%
<i>Divya Prakopa Ratrou Shanti Vrajat Mala Pravritti</i>	63.00%
<i>Ama Mala Pravritti</i>	85.71%
<b>OVERALL</b>	<b>79.96%</b>

Table no.: Showing Effects of *Shriphalshalatu Yog* on Overall Improvement In Subjective Parameters

Objective Parameters	Percentage Change
IBS-SSS(13)	59.02%
Bristol Stool Chart(12)	27.23%
VAS-Scale (A) <i>Sakati Vedana Shakrita</i>	88.33%
VAS-Scale (B) <i>Manda Vedana Yukta Mala Pravritti</i>	89.47%
<b>Overall</b>	<b>66.01%</b>

#### Overall Analysis and Interpretation – Subjective Criteria

The subjective parameters, which include *Antrakujan, Alasya, Daurbalya, Sadana, Drava, Ghana, Snigdha, Picchila Mala Pravritti, Ama Mala Pravritti, Sashabda Mala Pravritti, Pakshat, Maasat, Dashat Va Nityam Mala Vega Prakop, Divya Prakopo Bhavati Ratrou Shaanti Vrajat*, showed significant improvement after treatment with *Shriphalshalatu Yog*. Overall 79.96% improvement was seen in the subjective parameters, indicating substantial relief from symptoms. The statistical analysis ( $p < 0.05$ ) confirms that the observed reductions in symptoms are significant. This suggests that *Shriphalshalatu Yog* is highly effective in alleviating the subjective discomfort associated with *Sangrahani*.

#### Overall Analysis and Interpretation – Objective Criteria

The objective parameters including IBS-Severity Scoring System, Bristol Stool Scale, VAS Scale used for symptoms; *Sakati Vedana Sharita, Manda Vedana Yukta Mala Pravritti*, demonstrated overall 66.01% marked improvement. The Wilcoxon Signed Rank Test results ( $p < 0.05$ ) confirm that these improvements are statistically significant. These findings indicate that the treatment not only reduced symptoms but also improved health related quality of life of patients, thus supporting the effectiveness of *Shriphalshalatu Yog*.

## RESULT



The clinical investigation revealed that Shriphalshalatu Yog is highly beneficial in controlling the manifestations of *Sangrahani*, producing marked improvements in both subjective and objective variables. Statistical evaluation ( $p < 0.05$ ) validated the therapeutic efficacy of the trial drug, making it a promising line of management for this ailment. The symptom *Antrakujan* exhibited a reduction in mean score from **1.03 to 0.09**, reflecting a **91.26% improvement**, thereby demonstrating the formulation's capacity to relieve intestinal inflammation and hypermotility, reducing associated discomfort. In the same manner, *Alasya* improved by **64.42%**, with the mean grade decreasing from **1.63 to 0.46**, suggesting restoration of alertness and reduction in lethargy. *Daurbalya* was relieved by **74.63%**, as the mean grade reduced from **1.34 to 0.34**, signifying enhancement of general health and vitality.

In addition, *Sadana* showed a remarkable **79.38% improvement**, as the mean score dropped from **0.97 to 0.20**, indicating increased endurance and better ability to perform routine activities without early exhaustion. *Drava*, *Ghana*, *Snigdha*, and *Pichila Māla Pravṛtti* showed **84.73% improvement**, with the mean grade decreasing from **2.03 to 0.31**, reflecting normalization of bowel habits, with stools becoming properly formed, non-sticky, and easily passable. In relation to *Pakshat*, *Masat*, *Dashat Va Nityam Mala Vega Prakopa*, there was **76.50% improvement**, as the mean grade reduced from **1.83 to 0.43**, whereas *Ama Mala Pravṛtti* demonstrated **85.71% improvement**, with the mean score falling from **0.77 to 0.11**. *Sashabda Mala Pravṛtti* showed **complete remission (100%)**, with mean grade reduced from **0.63 to 0.00**, highlighting decline in gaseous distension and flatulence. *Divya Prakopa Bhavati Ratrau Shanti Vrajat Mala Pravṛtti* displayed **63% improvement**, as the mean score dropped from **1.00 to 0.37**. Objective parameters also revealed significant positive outcomes. The **IBS-Severity Scoring System improved by 59.02%**, as the mean value declined from **261.43 to 107.14**. The **Bristol Stool Scale showed 27.23% improvement**, as the mean reduced from **5.77 to 4.20**. **VAS-Scale (A) Sakati Vedana Shakrit (low back pain during defecation) showed 63.00% improvement**, as the mean score decreased from **1.71 to 0.20**. **VAS-Scale (B) Manda Vedana Yukta Mala Pravṛtti (mild abdominal pain during stool passage) revealed 89.47% improvement**, with mean grade reducing from **2.17 to 0.23**.

These results collectively demonstrate the multidimensional efficacy of Shriphalshalatu Yog in the management of *Sangrahani*. Notably, no adverse reactions were noted during the trial, further ensuring the safety and tolerability of this formulation. By providing effective symptomatic relief, better stool consistency and form, reduction in pain and frequency of bowel motions without untoward effects, Shriphalshalatu Yog proves to be a comprehensive and holistic therapeutic option for *Sangrahani*. This research establishes a baseline for further studies and supports the inclusion of Shriphalshalatu Yog in the management of analogous functional bowel disorders.

## DISCUSSION

In contemporary medicine, IBS management focuses on symptomatic relief through antispasmodics, laxatives, and probiotics, though these provide only temporary benefits and often cause recurrence or side effects. In *Ayurveda*, the action of *Shriphalshalatu Yog* can be explained through its *Rasa*, *Guna*, *Virya*, *Vipaka* & *Karma*. *Bilva* (*Kashaya-Madhura rasa*, *Grahi*, *Stambhana*, *Ushna Virya*) regulates bowel movements, reduces mucous, and strengthens *Grahani*; *Shunthi* (*Katu Rasa*, *Ushna Virya*, *Deepana-Pachana*, *Vata-Kapha Shamana*) stimulates *Agni*, digests *Ama*, relieves bloating, and reduces pain; while *Guda* (*Madhura rasa*, *Snigdha*, *Balya*, *Brimhana*, *Vatanulomana*) nourishes tissues, supports mucosa, and restores strength. Collectively, their actions; *Deepana*, *Pachana*, *Grahi*, *Balya*, *Rasayana*, and *Tridosha Shamana* corrects *Mandagni*, prevent *Ama* formation, strengthen *Grahani*, and alleviate symptoms like *Drava*, *Pichila Mala*, *Atipravṛtti*, *Daurbalya* & *Alasya*, thereby offering a holistic and sustained therapeutic effect in *Sangrahani*.

## CONCLUSION

- In the current research, based on the data obtained, it was noted that *Shriphalshalatu Yog* exhibited a marked impact on all the clinical features of *Sangrahani*.
- The influence of *Shriphalshalatu Yog* on the manifestations observed in *Sangrahani* was found to be statistically significant for both subjective as well as objective criteria.
- From this study, it may be inferred that the formulation *Shriphalshalatu Yog* aids in alleviating symptoms by balancing the *Tridosha* and disrupting the *Samprapti* of *Sangrahani*.
- No adverse reactions were recorded throughout the course of the trial.

## CONFLICTS OF INTEREST- None

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