



ISSN 2456-3110

Vol 8 · Issue 11

November 2023

Journal of  
**Ayurveda and Integrated  
Medical Sciences**

*www.jaims.in*

**JAIMS**

An International Journal for Researches in Ayurveda and Allied Sciences



**Maharshi Charaka**  
Ayurveda

**Indexed**

# A clinical study to evaluate the efficacy of *Arishtaka* enema in Pre-Operative Bowel Preparation - A Case Series

Suraj Ravi Anvekar<sup>1</sup>, Sweta KM<sup>2</sup>

<sup>1</sup>Post Graduate Scholar, Department of Shalya Tantra, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka, India.

<sup>2</sup>Professor, HOD, Department of Shalya Tantra, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka, India.

## ABSTRACT

Bowel preparation before surgery refers to the removal of bowel contents via mechanical cleansing with oral or rectal measures. The proposed benefits are reduced rate of surgical site infections and easier manipulation of the bowel during surgery. An ideal bowel-cleansing agent should be well tolerated by subjects, easily administered, inexpensive and produce adequate clearance. The most extensively used enema agent is soap but due to its chemical constituents it is known to cause various side effects like nausea, gastric irritation, pain, etc. In *Ayurveda*, *Acharya Sushruta* suggests patients are to be *Nivrutta Vega* i.e., free from natural urges prior to the surgery. Also, the drug *Arishtaka* seems to have the *Rechaka*, natural cleansing, non-allergic and surfactant properties. Considering these qualities, a preliminary attempt was made to study the effect of *Arishtaka* in bowel preparation. In the current study it has shown effective results and adequate quality of bowel preparation.

**Key words:** *Arishtaka*, Soap water, Enema, Bowel preparation.

## INTRODUCTION

Bowel preparation before surgery traditionally refers to the removal of bowel contents via mechanical cleansing with oral or rectal mechanical measures. The proposed benefits from the use of bowel preparation include reduced rates of surgical site infections and easier manipulation of the bowel during surgery.<sup>[1]</sup>

The ideal bowel-cleansing agent should be well tolerated by subjects, easily administered, inexpensive and produce adequate clearance without allowing explosive gases to form.<sup>[2]</sup>

### Address for correspondence:

Dr. Suraj Ravi Anvekar

Post Graduate Scholar, Department of Shalya Tantra, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka, India.

E-mail: ayursuraj@gmail.com

Submission Date: 13/09/2023 Accepted Date: 21/10/2023

Access this article online

Quick Response Code



Website: [www.jaims.in](http://www.jaims.in)

DOI: 10.21760/jaims.8.11.31

The most common enema solutions are sodium-phosphate, tap water and soap suds.<sup>[3]</sup> In soap suds enema the mixture of a mild soap and warm water is injected into the colon in order to stimulate a bowel movement. It is normally given to relieve constipation or for bowel cleansing before a medical examination or procedure.<sup>[4]</sup>

Even though the conventional soap suds enema is extensively in practice for preoperative bowel preparation, the chemical constituents present in the soap causes various side effects like nausea, gastric irritation, pain, etc.<sup>[5]</sup> and major concerns are colonic mucosal irritation and colitis<sup>[6]</sup> hence the quest for a new innovative modality arises.

In *Ayurveda*, our *Acharyas* have not directly specified regarding bowel preparation but in *Charaka Samhita*, *Basti Siddhi Adhyaya*<sup>[7]</sup> few enemas for *Pakwashaya Shodhana* have been explained. In *Sushruta Samhita*, *Agropaharaniya Adhyaya*<sup>[8]</sup> while explaining *Poorvakarma Vidhi*, he suggests the patients are to be "*Nivrutta Vega*" prior to surgeries, hence the bowel preparation becomes essential.

Based upon the above concepts, a modified method of enema using *Arishtaka Phala* which is having *Rechaka* [9] property is been taken for the study. Even many articles and studies have highlighted the natural cleansing, non-allergic & surfactant properties of *Arishtaka*, which is free from harmful chemicals, and available in abundance.<sup>[10]</sup>

### AIM AND OBJECTIVE

To evaluate the efficacy of *Arishtaka* enema for preoperative bowel preparation.

### DRUG REVIEW<sup>[11]</sup>

#### *Arishtaka*

Botanical Name - *Sapindus trifoliatus* L

Synonyms - *Sapindus laurifolia* VAHL

Other varieties

- *Sapindus mukorossi* GAERTN.
- *Sapindus emarginatus* VAHL.

Family - *Sapindaceae*

#### Vernacular Names

<b>English name</b>	Soap Nut, Soapberry
<b>Sanskrit name</b>	<i>Arishtaka, Arishta, Phenila, Arthasadhana, Guchhaphala, Krishnavarna, Kumbhabijaka, Mangalya, Garbhapatana, Prakirya, Raktabija, Rishta, Somavalkala, Pita Phena.</i>
<b>Kannada name</b>	<i>Antuvaalada Kaayi, Kugatemara, Burugukayi</i>
<b>Hindi name</b>	<i>Ritha, Aritha</i>

#### Properties<sup>[12-14]</sup>

<b>Rasa</b>	<i>Tikta, Katu</i>
<b>Guna</b>	<i>Laghu, Tikshna</i>
<b>Virya</b>	<i>Ushna</i>

<b>Vipaka</b>	<i>Katu</i>
<b>Prabhava</b>	<i>Vamaka</i>
<b>Doshaghната</b>	<i>Tridoshaghna</i>
<b>Rogaghната</b>	<i>Shotha, Vedana, Visphota, Kushtha, Gandamala, Kandu, Shirahshoola, Ardhavabhedaka, Murchha, Apatantraka, Kasa, Shwasa, Sandhivata, Amavata, Pakshaghata, Daha, Udaravikara, Krimiroga, Raktavikara, Rajorodha, Kastaprasava, Sarpavisha, Vrishcheekavisha, Visha, Grahabadha.</i>
<b>Karma</b>	<i>Vamaka, Shothahara, Vedanasthapana, Lekhana, Vishaghna, Kushthaghna, Maadaka, Krimighna, Raktashodhaka, Kaphanissaraka, Garbhashayasankochaka, Rechana, Garbhapatana, Kandughna.</i>

### MATERIALS AND METHODS

#### Materials required

- *Arishtaka Phala Churna* - 3g
- Water - 750ml
- Vessel - 1
- Enema Can - 1
- Lignocaine gel 2% - 1

#### Intervention

##### Preparation of *Arishtaka Churna* and Enema

- The *Aristaka Phala* was collected and authenticated by the Department of *Dravyaguna*, Sri Sri College of Ayurvedic Science and Research, Bengaluru.
- It was dried, deseeded and made into a coarse powder using *Khalva Yantra* and stored in an air tight container.
- *Aristaka* enema was prepared with all aseptic measures where 3g of *Arishtaka Churna* was added to 750ml of lukewarm water then stirred well till it turns frothy and filtered using kora cloth.

Figure 1: Arrangement of materials for enema



**Procedure**

The solution was administered using a sterile enema can, with the temperature carefully maintained within the range of 98°F to 105°F (37-40.5°C).<sup>[15]</sup> To ensure the absence of air bubbles in the tube, fluid was allowed to run through it before clamping. Subjects were positioned in the left lateral posture, and the nozzle tip was appropriately lubricated with 2% lidocaine gel. The tube was gently inserted into the anal canal, not exceeding a depth of 4 inches. Subsequently, the tube clamp was released, and the enema can was elevated to facilitate the unimpeded flow of the solution until it was emptied. Following this, subjects were repositioned in the supine posture and instructed to defecate upon feeling the urge. The evaluation encompassed both subjective and objective parameters to assess the effectiveness of the procedure.

Figure 2: Arishtaka Phala



Figure 3: Arishtaka Churna



Figure 1: Enema Can



Figure 5: Administration of enema



**Subjective Parameter**

**1. Pain (Assessment through VAS scale<sup>[16]</sup>)**

- No pain - 0
- Mild pain - 1-3
- Moderate pain - 4-6
- Severe pain - 7-10

**2. Nature of Evacuation<sup>[17]</sup>**

Parameters	Score
Easy evacuation	0
With mild stress	1
Require straining	2

**3. Feeling after Defecation<sup>[18]</sup>**

Parameters	Score
Satisfied	0
Partially Satisfied	1
Dissatisfied	2

**Objective Criteria**

**a) Aronchik Scale<sup>[19]</sup>**

To assess the quality of bowel preparation

Score	Rating/description	
1	<b>Excellent:</b> Small volume of liquid; > 95% of mucosa seen	Total score range: Minimum 1 (excellent) to maximum 5 (inadequate)  Scoring performed after evacuation of bowels.
2	<b>Good:</b> Clear liquid covering 5%-25% of mucosa, but > 90% of mucosa seen	
3	<b>Fair:</b> Semisolid stool could not be suctioned or washed away, but > 90% of mucosa seen	
4	<b>Poor:</b> Semisolid stool could not be suctioned or washed away and < 90% of mucosa seen	
5	<b>Inadequate:</b> Repeat preparation/screening needed	

**CASE STUDY AND RESULTS**

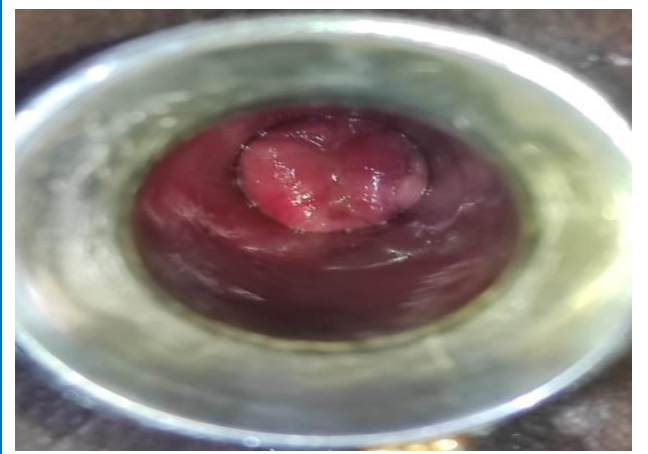
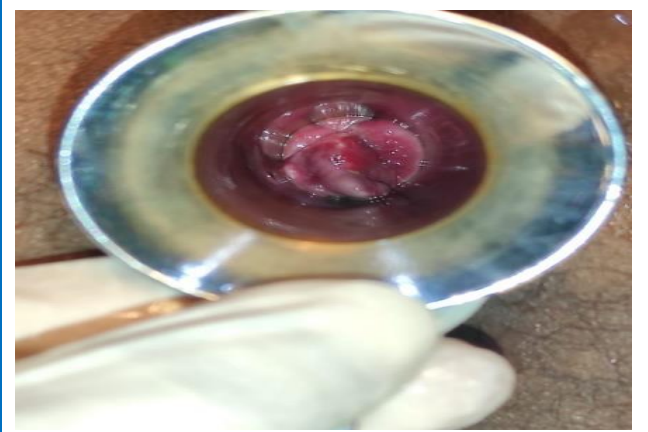
5 subjects aged between 21-60 years, with no systemic illness who were diagnosed with *Arshas* (Internal Hemorrhoids) and posted for *Kshara Karma* under Local/Spinal anesthesia were taken up for the study.

For bowel preparation, the subjects were provided with *Arishtaka* enema 2 hours prior to the surgery and assessment were done on the basis of subjective and objective parameters.

There was no pain noticed during or after the intervention. The subjects experienced easy evacuation and a feeling of complete satisfaction after defecation.

The Aronchik score showed highest grade i.e., Excellent bowel preparation where >95% of the inner mucosa was visible with no signs of congestion or excess secretion.

**Figure 6-8: Assessment of Inner Mucosa of Rectum & Anal canal using Proctoscope**





## DISCUSSION

An ideal bowel-cleansing agent should be well tolerated by subjects, easily administered, inexpensive and produce adequate clearance.

The *Arishtaka* possessing *Vatanulomana* action and its *Rechaka Prabhava* aids in the easy evacuation of bowel also the *Tikta Rasa* acts locally and does the *Shoshana*, thereby reduces the secretions, which helps in better visualization of the inner mucosa.

*Arishtaka* contains Saponins, which are natural, secondary plant metabolites with surfactant properties. The detergent properties of it results from their amphiphilic structure, thereby reduces the surface tension of water and manifest foam-forming properties. The analytical study has shown that the *Arishtaka* enema has a neutral pH 7.2, where soap water is highly alkaline in nature. This suggest that *Arishtaka* is less likely to irritate the inner mucosa of the rectum and anal canal. In the current study *Arishtaka* has shown promising results in effective evacuation and proper bowel preparation with no adverse effects.

## CONCLUSION

The benefits from the use of bowel preparation include reduced rates of surgical site infections, adequate visualization and easier manipulation of the bowel during surgery. The ideal bowel-cleansing agent should be well tolerated by subjects, easily administered, inexpensive and produce adequate clearance, the *Arishtaka* enema was ahead to match with the foresaid

qualities. It has showed enhanced cleansing without any known complications. This is attributed to its *Tikta Katu Rasa, Laghu Teekshna Guna, Ushna Veerya, Katu Vipaka, Tridosahara, Rechaka, Vedanasthapaka, Kapha Nissaraka, Krimighna* properties along with anti-inflammatory, analgesics, anti-oxidant, anti-microbial, anthelmintic activity. Hence, *Arishtaka* could be considered as a better choice of enema in the bowel preparation.

## REFERENCES

1. Diakosavvas M, Thomakos N, Psarris A, Fasoulakis Z, Theodora M, Haidopoulos D, Rodolakis A. Preoperative Bowel Preparation in Minimally Invasive and Vaginal Gynecologic Surgery. *ScientificWorldJournal*. 2020 Feb 14;2020:8546037. doi: 10.1155/2020/8546037. PMID: 32110164; PMCID: PMC7042550.
2. Hung, SY., Chen, HC. & Chen, W.TL. A Randomized Trial Comparing the Bowel Cleansing Efficacy of Sodium Picosulfate/Magnesium Citrate and Polyethylene Glycol/Bisacodyl (The Bowklean Study). *Sci Rep* 10, 5604 (2020). <https://doi.org/10.1038/s41598-020-62120-w>
3. Schmelzer M, Schiller LR, Meyer R, Rugari SM, Case P. Safety and effectiveness of large-volume enema solutions. *Appl Nurs Res*. 2004 Nov;17(4):265-74. PMID: 15573335.
4. Soapsuds enema [Internet]. *Biology Articles, Tutorials & Dictionary Online*. 2019 [cited 2023 Aug 20]. Available from: <https://www.biologyonline.com/dictionary/soapsuds-enema>
5. Gotter A. How to Use a Soap Suds Enema [Internet]. *Healthline*. Healthline Media; 2018 [cited 2023 Aug 20]. Available from: <https://www.healthline.com/health/soap-suds-enema>
6. Schmelzer M, Schiller LR, Meyer R, Rugari SM, Case P. Safety and effectiveness of large-volume enema solutions. *Appl Nurs Res*. 2004 Nov;17(4):265-74. PMID: 15573335.
7. Acharya Jadavaji Trikamji (Ed.) *Agnivesha's Charaka samhita of Acharya Charaka, Dridhabala Krit, Siddhi Sthana*. Ch.10. Varanasi: Chaukhamba Orientalia; 2015. p.835.
8. Acharya Jadavaji Trikamji (Ed.) *Sushruta Samhita, Sutrasthana: Agropaharaneeya adhyayam* ; Varanasi: Chaukhamba Surbharati Prakashan; 2014. p.18-23
9. PV Sharma, *Dravyaguna Vijnana*.Varanasi:Chaukhamba Bharati Academy; 1991.p.384-86.
10. Bhatta, S., Joshi, L.R., Khakurel, D., Bussmann, R.W. (2021). *Sapindus mukorossi* Gaertn. SAPINDACEAE. In: Kunwar, R.M., Sher, H., Bussmann, R.W. (eds) *Ethnobotany of the Himalayas. Ethnobotany of Mountain Regions*. Springer, Cham. [https://doi.org/10.1007/978-3-030-45597-2\\_214-1](https://doi.org/10.1007/978-3-030-45597-2_214-1)

11. Sapindus trifoliatus L. | Species [Internet]. India Biodiversity Portal. 2016 [cited 2023 Aug 24]. Available from: <https://indiabiodiversity.org/species/show/231088>
12. Sharma P.V., Dravyaguna Vijnana Volume 2, Chapter 5, 2018, Varanasi: Chaukhambha Bharati Academy, p.385
13. Sharma P.V., Priya Nighantu, Chapter Haritakyadi Varga, Verse no.250; 2004, Varanasi: Chowkhambha Vidyabhwan, p.54
14. E.R.H.S.S. Ediriweera. W.M.S.A. Premakeerthi. M.H.Y Perera. A Literary Review on Sapindus Trifoliatus (Gaspenela) and Its Medicinal Values. International Journal of Ayurveda and Pharma Research. 2021;9(2):51-55.
15. Nettina SM, Williams. Lippincott manual of nursing practice. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2010.
16. Haefeli M, Elfering A. Pain assessment. Eur Spine J. 2006;15 Suppl 1(S1):S17-24.
17. Ved vyas. Role of Ushnodaka Pana in Vibandha (MD dissertation). Bengaluru: Rajiv Gandhi University of Health Sciences; 2009.
18. Ved vyas. Role of Ushnodaka Pana in Vibandha (MD dissertation). Bengaluru: Rajiv Gandhi University of Health Sciences; 2009.
19. KastenberG D, Bertiger G, Brogadir S. Bowel preparation quality scales for colonoscopy. World Journal of Gastroenterology [Internet]. 2018 Jul 14 [cited 2021 Jul 5];24(26):2833–43. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6048432/> (accessed on 2023-07-09)

**How to cite this article:** Suraj Ravi Anvekar, Sweta KM. A clinical study to evaluate the efficacy of Arishtaka enema in Pre-Operative Bowel Preparation - A Case Series. J Ayurveda Integr Med Sci 2023;11:193-198. <http://dx.doi.org/10.21760/jaims.8.11.31>

**Source of Support:** Nil, **Conflict of Interest:** None declared.

\*\*\*\*\*