

A COMPARATIVE CLINICAL STUDY ON THE EFFICACY OF SADHYO VAMANA IN TWO DIFFERENT KAALAS IN URDHWAGA AMLAPITTA W.S.R. TO GASTRO-OESOPHAGEAL REFLUX DISEASE

Amulya G V¹, Shaila Borannavar², Tejali Chandrakant Rohidas³

^{1,3}PG Scholar, ²Associate Professor,

Department of PG and PhD studies in Panchakarma, Government Ayurveda Medical College, Bengaluru, India

Corresponding Author: amulya.gv2019@gmail.com

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ABSTRACT

Amlapitta is a condition where *Pitta* becomes *vidagdha* which is a deviation from normalcy. This *Vidagdha Pitta* is more of *amla rasa* with increased *dravatva* and when it attains *urdhwa gati*, produces symptoms like *amla udgara*, *hrit daha*, *kantha daha*, *hrillasa*, etc. and is called *Urdhwaga Amlapitta*. In contemporary science, the symptoms are explained under a condition called Gastro-oesophageal Reflux Disease. The condition of *Urdhwaga Amlapitta* fulfils all the criteria required to be treated with *Vamana*. *Sadhyo Vamana* means to eliminate vitiated *Dosha* through the oral route quickly. It requires minimal to no *Purvakarma*. One of the purposes of the study was to see if *Sadhyo Vamana* will suffice in combating *Urdhwaga Amlapitta* and the other was to see if *Sadhyo Vamana* is equally helpful when administered as and when the symptoms of *Urdhwaga Amlapitta* develop or aggravate, without having to wait for *Kapha kaala* for the same. For the present study subjects were randomly selected from the OPD and IPD of Shri Jayachamarajendra Institute of Indian Medicine Hospital (Teaching Hospital of G.A.M.C.) Bengaluru. With this study, it can be concluded that *Sadhyo Vamana* can help bring down the symptoms in *Urdhwaga Amlapitta*. There was significant improvement in symptoms like *Tikta/Amla udgara*, *Hrid- Kantha daha*, and *Trishna*. There was no improvement in *Aruchi* and *Trishna*. ESR and Hb% in both groups improved considerably and they were slightly better in Group A. Overall improvement in Group A was 18.65% better than in Group B. It can be concluded that *Sadhyo Vamana* can be carried out even in later parts of

the day to bring down the symptoms in *Urdhwaga Amlapitta*. However, when it is performed in *Kapha kaala*, it gives better results.

Keywords: Gastro-oesophageal Reflux Disease; *Amlapitta*; *Urdhwaga Amlapitta*; *Vamana*; *Sadhyo Vamana*; *Panchakarma*

INTRODUCTION

Panchakarma is the most preferred line of treatment in conditions of *Bahudoshavastha*. *Vamana* is the foremost procedure among *Panchakarma* and is the most effective treatment for conditions caused by the vitiation of *Kapha*, those associated with *Kapha*, and when *Dosha* are lodged in *Amashaya*.

Amlapitta is a condition where *Pitta* becomes *vidagdha* which is a deviation from normalcy. This *Vidagdha Pitta* is more of *amla rasa* with increased *dravatva* and when it attains *urdhwa gati*, produces symptoms like *amla udgara*, *hrit daha*, *kantha daha*, *hrillasa*, etc. and is called *Urdhwaga Amlapitta*.

In contemporary science, the symptoms are explained under a condition called Gastro-oesophageal Reflux Disease (GERD). Heartburn is the classic sign and the commonest complaint of patients with GERD when they approach a doctor. This symptom is also associated with a sour taste in the mouth. Regurgitation of the gastric contents may or may not be present.¹

The line of treatment in contemporary medicine is dietary & lifestyle modifications, use of H₂ receptor antagonists and proton pump inhibitors.² Prolonged use of antacids poses a risk for hypergastrinaemia, chronic kidney disease, fractures, dementia, spontaneous bacterial peritonitis, cirrhosis-related complications of hepatic encephalopathy, carcinoma of liver, micro-nutrient deficiency, and *Clostridium difficile* colitis.³ Patients with GERD will seek alternate therapy due to inadequate control of the symptoms, with over 40% not responding to medical treatment.⁴ Hence, an alternative treatment in Ayurveda may be beneficial for the society.

The condition of *Urdhwaga Amlapitta* fulfils all the criteria required, to be treated with *Vamana*. *Classical Vamana* involves more time, efforts, and is for conditions where *utklesha* of *Dosha* has to be

brought before expelling them. Hence, the subjects who were diagnosed with *Urdhwaga Amlapitta* and in whom the *Dosha* were already in *utkleshavastha* were chosen for the study. One of the purposes of the study was to see if *Sadhyo Vamana* will suffice in combating *Urdhwaga Amlapitta* and the other was to see if *Sadhyo Vamana* is equally helpful when administered as and when the symptoms of *Urdhwaga Amlapitta* develop or aggravate, without having to wait for *Kapha kaala* for the same.

Hypothesis:

H₀ - There is no difference in the efficacy of *Sadhyo Vamana* in *Kapha Kaala* and in *Utkleshita Kaala* in *Urdhwaga Amlapitta*

- *Vamana* is the treatment of choice to eliminate morbid *Kapha Dosha* or morbid *Pitta Dosha* situated in the *Amashaya*. *Sadhyo Vamana*, in classics, is indicated as an emergency management to eliminate the contents of *Amashaya* and to relieve the symptoms instantaneously. Hence, *Sadhyo Vamana* will have the same effect irrespective of when it is carried out.

H₁ - There is a significant difference in the efficacy of *Sadhyo Vamana* in *Kapha Kaala* and in *Utkleshita Kaala* in *Urdhwaga Amlapitta*

- *Sadhyo Vamana* induced in *Kapha kaala*, will result in expulsion of more *Kapha* as it is already in *chala-vastha*. This results in correcting the *Agni* and thus relieving the symptoms of *Urdhwaga Amlapitta*. This also helps in eliminating the *Dushita Pitta* that is situated deeper in the *Amashaya*.

- In *Urdhwaga Amlapitta*, there is increased *amlatva* and *dravatva* of *Pitta*. At the onset of symptoms, *Pitta* is *utklishita* and hence, inducing *Vamana* around such a time, will help in elimination of *dhushita Pitta* and this might contribute to *Samprapti Vighatana*.

Sadhyo Vamana:

Sadhyo Vamana means to eliminate vitiated *Dosha* through the oral route quickly. It requires minimal to no *Purvakarma*. *Sadhyo Vamana* consists of two words- *Sadhya* and *Vamana*. According to *Shabdakalpa Druma- Sadhya Pratyayah - tat kshane, tat kaale*. *Sadhya* means immediately, recently, quickly.

Though the term '*Sadyo Vamana*' is not mentioned in the classics, the procedure of *Vamana Karma* mentioned in *Charaka Samhita* in *Svasa roga* is quite similar and can be considered as *Sadhyo Vamana*.

Table no. 01 Showing the differences between classical *Vamana* and *Sadhyo Vamana*:

Classical <i>Vamana</i>	<i>Sadhyo Vamana</i>
Always follows <i>Purvakarma</i> like <i>Deepana</i> , <i>Ama pachana</i> , <i>Snehana</i> , and <i>Swedana</i>	Very little or no <i>Purvakarma</i> is needed
<i>Snehapana</i> is mostly done in <i>arohana krama</i> until <i>Samyak Snigdha Lakshana</i> are attained	<i>Snehapana</i> , if done, will be given as a single dose in a large quantity
Requires <i>vishrama kala</i>	Doesn't require <i>vishrama kala</i>
Suitable for subjects who are <i>Bhishagvashya</i> and have <i>pravara sattva</i>	Suitable for subjects who are not co-operative and are <i>Sukumara</i>
Followed when there is ample amount of time.	Followed when there is little or no time.
Practised when the subject can follow all the strict <i>pathya</i> and <i>vihara</i> needed	Followed when the subject can't follow most or any of the <i>pathya</i> and <i>vihara</i> needed to be followed during classical <i>Vamana</i>
Best when the <i>Dosha</i> are not in <i>utkleshavastha</i> , to make them <i>utklishta</i>	Best when the <i>Dosha</i> are already in <i>utkleshavastha</i>
Has longer-lasting effect	Has shorter-lasting effect
Not suitable in <i>aatyayika avastha</i>	Best suited for <i>aatyayika avastha</i>

Contraindication of *Sadhyo Vamana*: In subjects who are weak and unable to undergo or bear the exhaustion that follows the procedure, *Vamana* of any type is best avoided and *Shamana Chikitsa* is adopted instead, even if *Dosha* are in *utklesha avastha*.

***Chikitsa of Amlapitta*:** *Vamana* is the first line of treatment mentioned in *Kashyapa Samhita* for *Amlapitta*, followed by *Langhana* and *Laghu bhojana*. It is said that *Vamana* cures *Amlapitta* just as a tree is destroyed along with its trunk and branches, when its root receives a huge blow. *Vamana* is specifically indicated in persons with *aksheenabalamamsa*,⁵ in *Urdhwaga Amlapitta*, and in either *chiroththa* or *achiroththa Amlapitta*⁶.

Vamaka yoga mentioned by different authors are-

1. *Lavanambu*, *Dugdha*, *Ikshurasa*, *Madhudaka* or *Tikta dravya*⁷.

2. *Patola (Kulaka)* and *Nimba jala* along with *Madanaphala*, *Saindhava*, and *Madhu*⁸.

METHODOLOGY:

The present study titled, "A Comparative Clinical Study on The Efficacy of *Sadhyo Vamana* in Two Different *Kaalas* in *Urdhwaga Amlapitta* w.s.r. to Gastro-oesophageal Reflux Disease" was carried using the following drugs and materials-

Drugs:

1. *Go Ksheera* for *aakantha paana*
2. *Yashtimadhu* *Phanta*-
• *Yashtimadhu Kwatha churna* used in the study was from the brand 'Chaitanya Ayur formulations'.
- *Yashtimadhu Phanta* was prepared by adding 4 parts of boiling water to 1 part of *Yashtimadhu Kwatha churna*, macerated and filtered.
3. *Saindhava jala*
4. *Haridra varti- Haridra choorna* and *Ghee* were applied to cotton gauze and made

into a *varti* and dried in shade.

Table no. 02 Showing materials used in the study:

Materials	
1. Vessels	6. Spoon
2. <i>Abhyanga Droni</i>	7. Gas stove
3. <i>Bashpa Swedana Yantra</i>	8. <i>Doomavarti</i>
4. <i>Vamana Peetha</i>	9. Towel
5. Measuring jar and buckets	10. Cotton swabs

Source of data: For the present study subjects were randomly selected from the OPD and IPD of Shri Jayachamarajendra Institute of Indian Medicine Hospital (Teaching Hospital of G.A.M.C.) Bengaluru.

Diagnostic Criteria: Diagnosis was made on the following clinical features of *Urdhwaga Amlapitta* mentioned in Ayurvedic classics. They are: *Tikta-Amlodgara, Hrit-Kantha Daha, Aruchi, Shiroruja, Trishna.*

Inclusion criteria:

1. Subjects suffering from classical signs and symptoms of *Urdhwaga Amlapitta (Tikta/amla udgara, Hrid daha, Kantha daha, Aruchi, Shiro-ruja, Trishna)*
2. Subjects fit for *Vamana Karma*
3. Subjects in between 18 and 60 years of age
4. Subjects of either sex

Exclusion criteria:

1. Subjects with history of hiatus hernia, asthma, neoplasm, Hb less than 10g/dL
2. Pregnant and lactating women

Subjective criteria:

1. *Tikta/Amla Udgara*
2. *Kantha Daha*

3. *Hrid Daha*
4. *Aruchi*
5. *Shiroruja*
6. *Trishna*

Objective criteria:

1. pH
2. ESR
3. Hb%

Sample size & Grouping: A minimum of 40 subjects were randomly divided into 2 groups, A & B, with 20 subjects in each group.

Randomisation method: Subject allocation for respective groups was done by lottery method to avoid selection bias.

Study design: ‘A Comparative Clinical Study’

Study duration: 60 days

Intervention:

Group A: Subjects in group A were induced with *Vamana* early in the morning i.e., *Kapha kaala.*

Group B: Subjects in group B were induced with *Vamana* during later parts of the day when they developed symptoms.

Purvakarma:

Table no. 03 Showing *Purvakarma* adopted in the study:

GROUP A	GROUP B
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<ul style="list-style-type: none"> • ESR and Hb% of the subjects were recorded on the day before <i>Vamana</i>. • On the day of <i>Vamana</i>, the subjects were advised to have their bowels emptied, and to be on empty stomach. • At around 5:30 AM, they were made to undergo <i>Sarvanga Abhyanga</i> with <i>Murchita taila</i> followed by <i>Bhaspa Sweda</i> just before the start of <i>Vamana</i>. 	<ul style="list-style-type: none"> • ESR and Hb% of the subjects were recorded on the day before <i>Vamana</i>. • The subjects were advised to get admitted to SJIIM Hospital, on the day before <i>Vamana</i>. • On the day of <i>Vamana</i>, they were advised to have their bowels emptied in the morning. They were advised to have their meals as they normally would. • They were made to undergo <i>Sarvanga Abhyanga</i> with <i>Murchita taila</i> followed by <i>Bhaspa Sweda</i> as soon as the symptoms started.
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Pradhana Karma:

Pradhana karma followed was same for both the groups. The subject was instructed to sit on the *Vamana* chair and allowed to rest for 5 minutes in order to get acclimatized with the atmosphere. Vitals like Pulse, Blood Pressure, Respiratory Rate were recorded before *Vamana karma*. Procedure was once again explained to the subject and *Swasthivachana* was done. Administration of *Go Ksheera* up to full stomach was done (average 1.8 litre). Meanwhile, if *vegas* started, the time of the appearance of the first *vega*, pH of the vomitus of that *vega* were noted & recorded. *Sweda pradurbhava*, *Romaharsha*, *Kukshi adhmata*, *Hrullasa*, if appeared, were noted. *Yash-timadhu phanta* was administered to continue the procedure. During the bout, the subject was instructed to bow down properly and to open the mouth widely for expelling the vomitus comfortably. Massage over the back and on the sides of vertebral column was done in upward direction, forehead was held to provide support to the neck, a gentle pressure was given over the abdominal region around the umbilicus with the palms, sides of the chest were supported to avoid pain. Tickling the *talv pradasha* with fingers was advised if initiation of *vega* was less. Warm water was given to the subject for washing

hands. Lukewarm *Saindhava jala* was administered at the end. Procedure was continued till *pittanta* i.e appearance of *Pitta*, *Katu-tikta asyata*, *Kanta daha* or till the appearance of *Samyak Vamita lakshanas*. The pH of the vomitus of the last *Vega* and the time of its appearance were noted and recorded. The number of *Vegas* and the quantity of the vomitus were also recorded.

Pashchat Karma:

After completion of the *Vamana* procedure, *Gandusha* with *Yashtimadhu phanta* was given to the subjects. They were made to wash face, hands, and legs with lukewarm water and to sit comfortably. The vitals were again recorded. *Sheetajala sinchana* was done followed by *Dhumapana* with *Haridra varti*. The subjects were instructed to not sleep in the afternoon and to keep themselves warm. They were advised to have rice gruel when felt hungry and to drink only warm water when thirsty. They were advised to have light and bland diet, for the next 3 days and to resume having normal diet afterwards.

Assessment criteria:

Subjective criteria:

The following subjective criteria were considered for the study. They were graded as below and the subjects were assessed for the same, before the treatment, after the treatment, and during the follow up.

Table no. 04 Showing Subjective parameters in the study:

Parameter	Criteria	Grade
<i>Tikta/Amla Udgara</i>	No bitter/sour belching	0
	Appears 1–5 times/day; Only on consumption of sour and spicy food	1
	Appears 6–10 times/day; On consumption of any type of food	2

	Appears > 10 times/day; On consumption of any type of food	3
<i>Kantha Daha</i>	No burning sensation	0
	Burning sensation with intake of spicy food	1
	Burning sensation even with intake of normal food	2
	Burning sensation even on empty stomach	3
<i>Hrid Daha</i>	No burning sensation	0
	Burning sensation with intake of spicy food	1
	Burning sensation even with intake of normal food	2
	Burning sensation even on empty stomach	3
<i>Aruchi</i>	No <i>aruchi</i>	0
	Subject feels <i>aruchi</i> but takes food on time	1
	Avoids food sometimes	2
	Mostly avoids food	3
<i>Shiroruja</i>	No <i>shiroruja</i>	0
	Intermittent; relieved with <i>pathya</i>	1
	Continuous; relieved with medicine	2
	Continuous; not relieved with medicine	3
<i>Trishna</i>	No <i>trishna</i>	0
	On having spicy food	1
	On having any food	2
	Irrespective of food intake	3

Objective criteria:

1. pH of the vomitus expelled in the first *Vega* and in the last *Vega* was recorded.
2. ESR was recorded on the day before *Vamana* and on the 60th day after treatment.
3. Hb% was recorded on the day before *Vamana* and on the 60th day after treatment.

Statistical analysis:

The data collected on various parameters was subjected to statistical analysis in terms of Mean, Standard Deviation, and Standard error (SE). 'Unpaired t' test was carried out at $p < 0.05$, $p < 0.01$, $p < 0.001$. The obtained results were interpreted as:

Insignificante= P > 0.05
 Significant =P < 0.05
 Highly Significant= P<0.01 and P<0.001.

Assessment Of Total Effect:

Table no. 05 Showing Assessment of total effect in the study:

Class	Grading
0-25%	No Relief
26%-50%	Mild Relief
51% - 75%	Moderate Relief
76% - 99%	Marked Relief
100%	Complete Relief

Table no. 06 Showing Overall effect of Sadhyo Vamana in Group-A

EFFECT OF TREATMENT IN GROUP - A		
Class	Grading	No of subjects

0-25%	No Relief	1
26%-50%	Mild Relief	5
51% - 75%	Moderate Relief	2
76% - 99%	Marked Relief	2
100%	Complete Relief	10

Table no. 07 Showing Overall effect of *Sadhyo Vamana* in Group-B

EFFECT OF TREATMENT IN GROUP - B		
Class	Grading	No of subjects
0-25%	No Relief	4
26%-50%	Mild Relief	4
51% - 75%	Moderate Relief	6
76% - 99%	Marked Relief	2
100%	Complete Relief	4

Table no. 08 Showing Total Comparative results of Group A and Group B

Group A	Group B	Mean Difference	SE (±)	T value	P value
77.05	58.40	18.65	5.31	1.89	<0.05

DISCUSSION

ESR: In a study on Biochemical Manifestations of GERD, it was found that the average value of the ESR in subjects with GERD exceeded the maximum normal limit (21.243 ±16.1342 SD) and it was also statistically significant.⁹ Hence, this parameter was chosen as an objective parameter for the current study and to see if *Sadhyo Vamana* helped in bringing down the ESR levels. ESR of subjects in both the groups was evaluated one day before the treatment and on the 60th day after the treatment. In Group A, the mean score was 38.05 before treatment and it was reduced to 22.87 after the treatment with 39.91% improvement and it was statistically significant. In Group B, the mean score was 31.35 before treatment and it was reduced to 20.92 with 33.29% improvement. In both the groups it was found that the average ESR was considerably raised and in Group A, it was above the maximum normal limit. After the treatment, there was reduction in ESR, and it was statistically significant in both the groups. The raise in ESR could be because of acid reflux causing inflammation in the gastric lining and when the acid reflux is suppressed by any means, it could result in healing of the gastric lining and thus reduction in ESR.

Hb%: In the same study mentioned above, lower levels of haemoglobin (Hb) were recorded in 39% of subjects with GERD as opposed to 16.7% of subjects without GERD. This difference was statistically significant.⁹ In the current study in group A, the mean Hb% was 11.64 g/dL before treatment and it increased to 13.38 g/dL after the treatment with 14.95% improvement. In group B, the mean Hb% was 12.69 g/dL before treatment and it increased to 14.04 g/dL after the treatment with 10.64% improvement. It was statistically significant in both the groups. This could be because of better absorption of the nutrients, including iron, when the gastric lining recovers from inflammation.

Comparative analysis of the overall effect of the treatments in both the groups was done statistically with unpaired-t test. The test shows that the treatment is significant in Group A when compared to Group B. Group A overall result is 77.05% and Group B overall result is 58.40%.

Probable mode of action:

Role of *Vamana* in *Urdhwaga Amlapitta* can be studied under the following headings:

1. ***Adhishthana:*** *Amlapitta* is an *Aamashayotha vyadhi*. Hence, *Vamana* becomes the choice of *Shodhana* to eliminate any *Dosha* present in *Amashaya*.

2. **Dosha:** Pitta is the Dosha that is deranged in Amlapitta. Kapha is also involved to an extent. The Doshas are situated in Kaphasthana. Hence, Vamana expels the Dushita Pitta and Kapha from Kaphasthana.
3. **Dhatu:** Rasa dhatu is the main Dushya in Amlapitta and langhana is the line of treatment for Rasa dushti. Vamana can be considered as a type of langhana as it does apakarshana.
4. Vamana is urdhwabhagahara and hence it eliminates the dushita Pitta which is Urdhwagami and brings Dosha saamyata.
5. Ksheera when used for Aakanthapana brings about utklesha and Yashtimadhu which is a vamanopaga aids in easy vomiting.
6. There was a significant improvement in ESR values and Hb%. This may imply that with the elimination of gastric contents, including Hydrochloric acid, there was reduction in the inflammation of the gastric lining resulting in reduced ESR and this in turn lead to better absorption of nutrients including iron, from the stomach, and hence there was an improvement in Hb level.

CONCLUSION

Amlapitta is caused by Vidagdha Pitta situated in Amashaya. Vamana results in the elimination of Vidagdha Pitta that is situated in Amashaya. Vamana can be carried out without any Purvakarma if the Doshas are in utkleshavastha. Ksheera when used for Aakanthapana brings about utklesha and Yashtimadhu which is a vamanopaga aids in easy vomiting. With this study, it can be concluded that Sadhyo Vamana can help bring down the symptoms in Urdhwaga Amlapitta. There was significant improvement in symptoms like Tikta/Amla udgara, Hrid- Kantha daha, and Trishna. There was no improvement in Aruchi and Trishna. ESR and Hb% in both groups improved considerably and they were slightly better in Group A. Overall improvement in Group A was 18.65% better than in Group B. Reduction in the ESR levels may be because of the reduced inflammation of the gastric mucosa after Sadhyo Vamana. This helps in better absorption of nutrients,

including iron, and hence, this may have resulted in a rise in Hb%. It can be concluded that Sadhyo Vamana can be carried out even in later parts of the day to bring down the symptoms in Urdhwaga Amlapitta. However, when it is performed in Kapha kaala, it gives better results. In this study, the subjects were monitored for only 60 days. In case of relapse of the symptoms, repeated administration of Sadhyo Vamana may be required.

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