



## Research Article

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### STANDARDIZATION OF SADYOVAMANA IN CHILDREN: EXCERPTS FROM EXPERIENCES

Reena Kulkarni <sup>1\*</sup>, Srilakshmi Chandramohan <sup>2</sup> and Reshmi Pushpan <sup>3</sup>

<sup>1</sup>Professor and Head, Department of Kaumarabhritya, SDM Institute of Ayurveda and Hospital, Ancephalya, Kumbalgodu post, Bangalore, Karnataka, India

<sup>2</sup>Assistant Professor, Department of Kaumarabhritya, SDM Institute of Ayurveda and Hospital, Ancephalya, Kumbalgodu post, Bangalore, Karnataka, India

<sup>3</sup>Associate professor, Department of Agada Tantra, SDM Institute of Ayurveda and Hospital, Ancephalya, Kumbalgodu post, Bangalore, Karnataka, India

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#### \*Corresponding author

E-mail: drreenakulkarni@gmail.com

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#### ABSTRACT

Vamana is a therapeutic bio-cleansing measure meant for the elimination of dosha mainly Kapha accumulated in the Amashaya and Urdhvasareera through oral route by inducing vomiting. It is the therapy of choice for Kaphaja disorders. Childhood is the Kapha predominant age and hence prone for Kapha related problems. There is very less documentation on therapeutic Vamana in children. Here is our experience of conducting Vamana in recurrent respiratory illnesses in children. A total of 12 children aged between 5 and 12 years with recurrent respiratory illnesses were induced therapeutic Sadyovamana. Attempt was done to draw inferences and standardize the same. An average of 600 ml akanthapana was done with sweetened milk or lassi. Vamana yoga used was powder of Vacha (*Acorus calamus*), pippali (*Piper longum*), Yashtimadhu (*Glycyrrhiza glabra*) and Saindhava lavana (Rock salt). Average yoga required was 8.5 g. Yashtimadhu Phanta was used as vamanopaga. Average of 7 Vega noted in children. There were 8 children with Pravara Shuddhi, 3 with Madhyama Shuddhi and one child with Avara Shuddhi. Amongst the clinical conditions 3 children were of tamaka shwasa, 8 were of Kaphaja Kasa and one was of Kaphaja Kasa with tundikeri. Average of 2 hours was taken to complete the whole procedure. Compliance to the therapy was appreciable. Major difficulty was in convincing the child for intake of vamana yoga and vamanopaga. Standard operative procedure for Sadyovamana in children developed. Vamana is highly effective in-patient therapeutic procedure in children with recurrent respiratory illnesses.

**Keywords:** Ayurveda, Children, Standardization, Panchakarma, Vamana

#### INTRODUCTION

Vamana is foremost amongst Panchakarma<sup>1</sup> (therapeutic bio-cleansing procedures)<sup>2</sup> in which vomiting is induced for elimination of dosha (morbid humors) especially Kapha and Apakva pitta<sup>3,4</sup> accumulated in the Urdhvasareera<sup>5</sup> (Upper part of the body) by oral administration of Vamaka dravya (emetics) in individuals.

Vamana is indicated, in majority of Kapha diseases,<sup>6</sup> Ama conditions, acute poisoning, stanya dushti (vitiated breast milk), arbuda (malignancy) and Psychological disorders.<sup>7-9</sup> Childhood is a Kapha predominant age and children are more prone to Kapha related problems.<sup>10</sup> In a normal course Vamana is carried out in a sequential course of Purva karma involving Deepana-pachana, Snehana and Swedana therapies followed by the primary therapy and the follow up procedures of specific dietary regimen called Samsarjana.<sup>11</sup> In certain Kapha predominant diseases where in vitiated Kapha and Pitta are already in Koshta (upper abdomen), Sadyovamana (instant emesis) is found effective to relieve the acute features of the disease.<sup>12</sup> Sadyovamana may be performed without Snehana (internal oleation) and Swedana (sudation).<sup>13</sup> This is usually adopted for acute Tamaka Shwasa (bronchial asthma)<sup>14</sup> Amlapitta (acid peptic disorder)<sup>15</sup> and Ajeerna (indigestion).<sup>16</sup> Clinical studies on standardization of Vamana Vidhi<sup>17</sup> in adults by traditional and classical methods have already been reported. Previous studies help in understanding the safety margins of Vamana Vidhi in healthy adult volunteers at the physiological and biochemical changes during Vamana.<sup>18</sup> A

single case study of a ten year child with Tamaka Shwasa treated by Sadyovamana using Lavana Jala as an Atyayika chikitsa has been reported.<sup>19</sup> One year hospital prevalence data showed that majority of children visiting Kaumarabhritya outpatient department were of RRTI especially Kaphaja Kasa<sup>20</sup> and where therapy of choice is vamana. There are no publications on procedural standardization of Vamana in children so far. The aim of this retrospective hospital data records study is to critically analyze the various aspects of Purva karma (pre procedure), Pradhan karma (Main Procedure) and Paschat karma (Post procedure) of Sadyovamana in children with recurrent respiratory illnesses to standardize the Sadyovamana procedure.

#### MATERIALS AND METHODS

In this retrospective study 12 children aged between 5 and 12 years, suffering from recurrent respiratory illnesses (RRTI) who attended outpatient department of Kaumarabhritya (Ayurveda Pediatrics) and underwent therapeutic Sadyovamana as in patients between January 2019 to December 2019 at Sri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore were involved. The data was retrieved from the EERPMS (educational enterprise resource planning and management software) used for documentation of Outpatient details and Inpatient medical records of the hospital.

Informed consent was obtained from the parents for conducting the procedure, documentation and publication.

### Diagnostic criteria and Inclusion criteria

Children in the age of 5 to 12 years suffering with features of RRTI at least 3 episodes in last 6 month, who underwent therapeutic Sadyovamana as inpatient between January 2019 to December 2019 at Sri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore.

### Exclusion criteria

Children unfit or not willing to undergo therapeutic Sadyovamana and diagnosed cases of congenital heart diseases and Tuberculosis were excluded.

### Ethical Statement

The study was carried out as per International conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP) or as per Declaration of Helsinki guidelines.

### Method of induction of Sadyovamana in children

#### Poorva karma (Preoperative procedure)

Counseling of child and parent was done for proper participation for Sadyovamana. They were admitted 1 day prior to the planned Vamana procedure. Chest X-ray and ECG were done to rule out congenital heart disease and tuberculosis. Massage was done with Brihat Saindhavadi taila for 15 minutes followed by proper sudation either by Nadi Sweda or Bashpa Sweda (steam chamber) for 10 minutes depending on the compliance of the child. Food to increase Kaphadosha in the body such as curd rice, black gram vada, sweets rich in milk and cream, sweet sesame balls, jalebi were advised on the day prior to Vamana.

Parents were asked to procure one-liter milk and 100 g of jaggery for the preparation of supportive emetic formulation. For preparation of Lassi (sweetened butter milk), the supportive emetic liquid was prepared by churning one liter of curdled milk with 100 grams of jaggery one hour prior to emesis. Milk or sweetened milk can be used instead. Emetic formulation (Table 1) was prepared and kept ready.

Table 1: Contents of emetic drug

Ingredient	Scientific name / Common name	Quantity
Vacha	<i>Acorus calamus</i>	3 g
Yashtimadhu	<i>Glycyrrhiza glabra</i>	5 g
Pippali	<i>Piper longum</i>	2g
Saindhava Lavana	Rock salt	2 g
Madhu	Honey	20 ml

### Pradhana Karma (Main procedure)

Child was asked to wake up around 7 am and after voiding natural urges, given massage followed by Nadi Sweda or Bashpa Sweda. Children who were habituated to eat breakfast early were optionally given approximately 100 ml rice gruel with 20 g jaggery and 5 ml of ghee. Child was taken to Vamana procedure room around 8 am.

### Induction of Vamana

Child was made to sit facing north or east on knee high chair with arm rest and a large tub was placed in front of the child at appropriate height to vomit into it. Measured quantity of sweetened milk or sweetened buttermilk was given to child till it filled their stomach (Akanthapana).

### Administration of emetic drug

After Akanthapana, the child was given 8 to 10 grams of the emetic drug and observed for 30 minutes for spontaneous initiation of Vamana, number of bouts and the terminal dosha evaluation so as to assess the degree of Shodhana.<sup>21</sup>

### Paschat Karma (post-operative procedure)

After Vamana, Dhumapana (inhalation of medicated fumes) done to remove the remnants of dosha. Special dietary regimen of rice gruel for one day and light diet for another two more days was advised to gradually increase and normalize the digestive power.

### RESULT

Amongst twelve participants, ten were boys and two girls. Observations done on various aspects of Vamana are summarized in Table 2.

Table 2: Observations on Sadyovamana in children

S. No.	Particulars	Quantity
1	Akanthapana	660 ml
2	Vamana yoga	8.5 g.
3	Yashtiphanta	710 ml
4	Lavanajala	690 ml
5	Ushnajala	880 ml
6	Average time taken to initiate	20 minutes
7	Vega	7
8	Time between bouts	10 to 15 minutes
9	Time taken to complete procedure	2 hours
8	Shuddhi	8 Pravara Shuddhi 3 Madhyama Shuddhi 1 Avara Shuddhi
9	Pittanta	3 children
10	Diseases	9 Kaphaja Kasa 3 Tamaka shwasa

It was noted that Vamana bouts were quick and less distressing when children took Yashtiphanta as vamanopaga whereas Lavanajala as vamanopaga produced mild discomfort. Ushnajala was easy to administer and children readily took it. Most of the children reported abdominal discomfort, nausea and increased salivation during the waiting time. Horripilation and sweating were reported by few. All children had spontaneous vomiting. Total approximate vomitus at the end was around 1000 ml. One or two additional bouts of Vamana were seen in 3 children after they were sent back to rest. 1 child had two times of loose stools in rest room after Vamana.

There were no serious complications noted throughout. Major difficulty was to convince them for intake of large quantity of liquids given during Vamana. Yashtiphanta and emetic drug were found commonly disliked for their unpleasant taste and smell.

## DISCUSSION

Vamana may be considered as an invasive procedure of bio-cleansing suited for disorders of Kapha alone or when in combination with pitta dosha.<sup>2</sup> It is commonly adopted in adults to treat conditions like tamaka shwasa, amlapitta, skin related conditions etc. Childhood is Kapha predominant age and incidence of Kapha related illnesses are high<sup>10</sup>. Thus Vamana is the choice of bio-cleansing for children. Vamana procedure in children is challenging as it requires technical expertise and therefore practiced by a small number of Ayurveda pediatric experts. Children aged 6 years and above may safely undergo Vamana under expert supervision.<sup>22</sup>

Willingness of the child to undergo the procedure forms the core aspect of Vamana requiring detailed parental and child counseling on the complete course of Vamana. Thorough psychological preparation of the child towards the medicines in large quantity, bitter taste, unpleasant smell and various

discomforts that may occur during the procedure of emesis along with its long-term benefits are mandatory for safe and comfortable Vamana procedure. Children above the age of five years can be easily counselled.

Sadyovamana is done as an instant emesis. Hence, snehapana (oral administration of sneha) is not done. Moreover, as children are said to be Sada Snigdha (oleated) owing to predominant use of milk and ghee in their diet. Thus, one can readily induce abhyanga (oil massage) and Swedana (sudation) prior to Vamana.<sup>23</sup> When in acute conditions of Kaphadosha predominance in amashaya like shwasa (dyspnoea) even massage and sudation can be avoided. Fixation of dose of emetic drug and also that for prior snehapana is solely based on strength of child, digestive capacity, constitution, age and delicacy of the child. Though the waiting period expecting bouts of Vamana to initiate is 1 muhurta (48 minutes), practically we saw that children had bouts of vomiting in 15-20 minutes itself. During this most of them reported abdominal discomfort, nausea and secretions in the mouth indicating accumulation of dosha in stomach and their upward movement for expulsion.<sup>24</sup> Lot of technique and patience were required to make children to drink vamanopaga liquids in between the bouts as vomiting itself is unpleasant and discomfort for children. Few were even threatened of nasogastric insertion and invasive procedure or even confinement in order to compel them to drink enough vamanopaga. 4, 6 and 8 bouts of vomiting and 1 Prastha (640 ml), 11/2 Prastha (960 ml) and 2 Prastha (1280 ml)<sup>25</sup> suggest best therapeutic effects. So also expulsions of pitta or belching towards end of Vamana induction are classically suggested indicators wind the procedure.<sup>26</sup>

Compliance to the therapy was appreciable. Major difficulty was in convincing the child for intake of Vamana yoga and vamanopaga. Exact amount of the vomitus was not recorded for each child.

Table 3: Standard operative procedure for Sadyovamana in Children

Poorva Karma	Pradhana Karma	Paschat Karma
One day prior to Sadyovamana <ul style="list-style-type: none"> <li>• Patient Preparation /Counseling</li> <li>• Investigations- chest X ray, ECG</li> <li>• Massage and Sudation – one day optional</li> <li>• Diet: Kapha vardhana ahara</li> <li>• Medicine Procurement</li> </ul>	On the day of Sadyovamana: <ul style="list-style-type: none"> <li>• Massage and sudation</li> <li>• 100 ml Rice gruel to eat (Optional)</li> <li>• Akanthapana- Sweet milk/ Lassi</li> <li>• Administration of emetic drug with intermittent supportive emetic liquids</li> <li>• Observation for initiation of bouts</li> </ul>	<ul style="list-style-type: none"> <li>• Hot water gargling</li> <li>• Dhumapana (inhalation of medicated fumes)</li> <li>• Light diet for one day</li> </ul>

## Limitations

The timeline for each bout of vamana was not recorded. Total quantity of vomitus of each child was not recorded.

## CONCLUSION

Standard operative procedure for Sadyovamana in children developed. Vamana is highly effective in-patient therapeutic procedure in children with recurrent respiratory illnesses. It is prudent to induce Vamana after 5 years of age. Pre therapy counseling for child and parent are very essential.

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