

## PHYSIOLOGICAL CHANGES DURING VAMAN PROCEDURE

[Sumeet Saini](#)<sup>1</sup>, [Muralidhar P Pujar](#)<sup>2</sup>, [Ashvini Kumar M](#)<sup>3</sup>, [Lohith B A](#)<sup>4</sup>

<sup>1</sup>(PG Scholar), <sup>2</sup>(Professor and MS), <sup>3</sup>(Professor and HOD), <sup>4</sup>(Associate Professor);

Department of Panchakarma, Sri Dharmasthala Manjunatheshwara Ayurvedic Medical College and Hospital, Hassan, Karnataka, India

**Corresponding Author:** [drsumeetsaini1@gmail.com](mailto:drsumeetsaini1@gmail.com)

<https://doi.org/10.46607/iamj0209072021>

(Published Online: July 2021)

**Open Access**

© International Ayurvedic Medical Journal, India 2021

**Article Received:** 08/06/2021 - **Peer Reviewed:** 13/06/2021 - **Accepted for Publication:** 18/06/2021



### ABSTRACT

**Introduction:** *Vaman karma* (therapeutic emesis) is one of the five *Shodhan* (purificatory) procedures mentioned in Ayurveda. It helps to expel vitiated *Doshas* from *Urdhvabhaga* i.e. mouth. A person performing *Vaman* regularly has very less chances of suffering from any disease. It is used as both a preventive and curative measure in healthy and diseased persons, respectively. So here in this study efforts have been made to observe the physiological changes occurring in various parameters like Pulse rate, Blood Pressure, Temperature, and oxygen saturation at different intervals, before the onset of *Vega*, just after 3-4 sec of completion of *Vega*, and during the whole of the *Vaman* procedure to understand the safety aspects of the procedure in patients and healthy volunteers. **Methods:** 20 subjects were selected irrespective of gender and religion from IPD of the Department of Panchakarma; they are first prepared with *Deepan-Pachan* followed by *Snehan* and *Swedan* before *Vaman karma*. **Results:** on keen observation, it was found that there is a lot of variation in heart rate and sudden fluctuation in blood pressure at the time of *vega* during *Vaman* procedure. **Conclusion:** *Vaman karma* can be performed safely by anyone with proper assessment and examination of the patient without any complication.

**Keywords:** *Vaman*, *Panchakarma*, physiological changes

## INTRODUCTION

*Vaman karma* is the first procedure among the five treatment modalities mentioned as *Panchakarma* in the classics. *Vaman* helps to remove *Apakva pitta* and *kapha* forcibly through the oral route<sup>[1]</sup>. *Vaman* expels vitiated *dosha* from the *Urdhva bhaga* (upper part) of the body i.e. mouth<sup>[2]</sup>. According to *Sushruta*, diseases like *kasa*, *Upalepa*, *Svarabheda*, *Nidra Tandra*, *Mukhadaurgandhya*, *Kapha Praseka*, diseases produced due to toxins or *Grahani roga* will not occur in the person who performs *Vaman* regularly<sup>[3]</sup>. *Vaman karma* being one of the *Panchakarma* procedures. *Panchakarma* not only helps in the management of diseases but also works as a therapeutic measure to improve the body resistance immune system<sup>[4]</sup> thereby working as both curative and preventive therapy in both diseased and healthy individuals respectively by detoxification of the body<sup>[5]</sup>. Already existing works contain gross knowledge of only before and after changes of the physiological parameters here efforts have been made to examine the patient during the whole procedure and changes occurring at the time of *Vega* are noticed and analyzed.

### Material and Methods

The present study was conducted at the IPD of the Department of *Panchakarma*, for which 20 subjects were selected irrespective of gender and religion based upon inclusion criteria.

### Inclusion Criteria

- Subjects aged from 18 years to 60 years.
- Subjects fit for *Vaman* and not having any complications for fatal condition.

### Exclusion Criteria

- Subjects having any history of uncontrolled Hypertension, Diabetes, renal disorders, gastric or peptic ulcer, any acute infection or any chronic disease and the patients who are not fit for *Vaman Karma*.
- Age group lesser than 18 and greater than 60 years.
- Pregnant/lactating women.
- Subjects with lactose intolerance.

### Standard operative procedure for *Vaman*

The subject's written consent was taken in English and regional language and were informed about the procedure on the day of admission for *Vaman*. The physical and physiological examination was done properly along with a routine haematological examination to rule out any pathology condition. The procedure of *Vaman* was carried out as per standard protocol as described in classics.

**Purva Karma:** *Deepan-pachan*, *Snehapan*, *Abhyanga*, *Swedan*.

**Deepan-Pachan:** *Chitrakadi vati* (500mg) 2-0-2 (B/F) for 2 days.

**Snehapan:** In all the subjects, the initial dosage was started with 30 ml, with a daily increase of 30ml/day depending upon *Agni* and *Bala* of the subject till the attainment of *Samyak Snigdha lakshan*. *Snehapan* was administered with a minimum of 3 days and a maximum of 7 days to the subject in *Arohan karma* (increasing dose). As described in table No1 below: Out of 20 subjects, 4 subjects completed *Snehapan* within 3 days with a maximum *Sneha* quantity of 90 ml, 7 subjects completed *Snehapan* within 4 days with a maximum *Sneha* quantity of 120ml, 9 subjects completed *Snehapan* in 5 days with maximum *Sneha* quantity of 150ml.

**Abhyanga:** After the attainment of *samyak snigdha lakshan*, one-day *visharamkala* was advised to subject on the day before *Vaman karma*. On that day subject undergoes *Abhyanga* and *Bashpa swedana* and for the whole day *kaphoutkleshak ahar* like sweets, *tila-gudda pishti*, curd rice etc. was advised to be taken.

On the day of *Vaman*, the subject was taken for *Abhyanga* for around 15-20 min followed by *Bhaspa sweda* till attainment of *Samyak swin lakshan*, post that subject was advised to take hot water bath.

**Pradhan Karma:** *Ghrita yukta yavagupana* - After taking bath, the subject was made to sit on a knee height chair<sup>[6]</sup> and was initially administered *yavagu* (200-250gms) followed by 2 glasses of milk for *akanthapan*. *Vaman aushad* prepared was administered after *Mantrachcharana* and the subject was observed for *lakshan* like *sweda pradurbhav*, *roma*

*harsha, kukshi adhmana, praseka and hrlasa* [7]. After these *lakshan* were seen, the subject was administered with *Vamnopaga dravyas* like milk, *yashtimadhu phanta* and *saindhav jala* to drink in sequence for inducing the *Vaman*.

For all the subjects, *Vaman aushad* was administered in a fixed composition as shown in table no 2 below.

After the administration of the medicine, subjects were observed for a maximum of one *Muhurat kala* (48 minutes) till the appearance of *lakshanas*.

**Paschat karma:** After cleansing of the oral cavity by *kavala* (gargling with warm water), *Hashtapada Prachalan* with lukewarm water, subjects were observed for one *Muruhta* and given *dhoomapana* (medicated nasal smoke inhalation) through both nostrils and mouth respectively. After that *Peyadi Samsarjana karma* was advised based on the *Shuddhi lakshan* of the subjects.

*Suddhi* was assessed by *Vaigiki shuddhi* (number of bouts), *Maniki shuddhi* (volume of vomitus), *Antiki shuddhi* (the result of vaman), *Lakshanik suddhi* (symptoms of *samyak vaman*)

**Observations and results:** Various Physiological parameters have been assessed like Sweating, Pulse, Blood pressure, oxygen Saturation (SPo<sub>2</sub>), Temperature

**Assessment –**

**Samyak Vaman lakshana –** *Samyak shuddhi* was assessed based on various parameters like:

- *Vigiki, Maniki, Antiki, Lakshanik*

**Changes in sweating**

After administering the *Vaman aushad*, subjects were observed for max (15-20 min) for medicine to act during this period. Most of the subjects showed a symptom of sweating followed by *kukshi adhman* (abdominal distension). After attaining these *lakshan* subject was given milk to drink.

Min time taken for sweating to occur was 4 min as compared to the max 18 min for sweating over the forehead. Listed in table no 3 below:

**Changes in pulse rate**

It has been observed that the pulse rate increases during *Vaman* procedure and comes back to normal after

completion of the procedure. During the whole procedure, pulse was around 140-150/min but at the onset of *Vaman vega*, pulse rate reduces to around 100-110/min, then just after *vega*, suddenly increases to 160-170/min then approx. 30-45 sec later comes to 140-150/min. Again 15-20 min after the completion of the procedure, it becomes normal i.e. around 90-100/min. As shown in table no 4 below:

**Changes in Blood Pressure**

There was seen a marked increase in both systolic and diastolic blood pressure during the *Vaman karma*. The rise in systolic pressure was marked more as compared to diastolic pressure during the whole procedure. The systolic pressure ranged from 110-160 mm of Hg during the *Vaman* procedure however it became normal after completion of the procedure. The diastolic pressure ranged from (72-102) mm of Hg during the procedure which became normal after the completion of the procedure. As shown in Tables 5 & 6 below.

**Changes in Oxygen Saturation (Spo<sub>2</sub>%)**

It has been observed that a slight variation occurs in Spo<sub>2</sub> during the *Vaman* procedure. At the onset of *Vaman* Spo<sub>2</sub> suddenly decreases and then just after the *Vega* it became normal i.e. ranging from 86% to 98%. As shown in table no 7 below.

**Changes in Temperature**

No marked changes observed in temperature during *Vaman*. Only 0.2° to 0.3°C rise in temperature was observed during the *Vaman* procedure ranging from 36.0°C to 36.8°C. As shown in table no 8 below.

## DISCUSSION

**Discussion on Pulse rate**

Before *Vaman*, the subjects were found to have a normal pulse rate around (90 – 100/min) but during the *Vaman* procedure, a slight increase in pulse rate approx 140-150/min is observed which is because, in case of stress and exercise condition, muscles need more of oxygen supply and to compensate that, the body needs more cardiac output to meet up the need. Heart rate speed up to fulfil that need and this condition of heart rate i.e. around 140-150/min is considered as a condition of Cardiac Arrhythmias under the cate-

gory of Physiological Sinus Tachycardia. And the sudden fluctuation observed during the onset of *Vega* and just after 3-4 seconds of *Vega* is because of the stimulation of Vagus outflow which directly interferes with the automaticity of the SA node as well as the AV node. During *Vega*, inspiration won't be there so vagal outflow will be functional which will inhibit the SA node and heart rate will be suddenly come down. But just after the *Vega* due to emptying of the stomach, decreased abdominal pressure and increased thoracic capacity, a deep inspiration will occur inhibiting Vagal Outflow so SA node will be fully functional and shoots up the heart rate from 100-110/min at the time of *Vega* to 148- 172/min just after 3-4 seconds of *Vega*. So, heart rate increases during inspiration and decreases during post-inspiration and expiration<sup>[8]</sup>.

**Discussion on blood Pressure:** During *Vaman karma*, there was seen a sudden increase in blood pressure just after the *Vega*. The muscular contraction causes an increase in blood pressure. The violent contraction of the skeletal muscles seen during retching causes an increase in blood pressure and there is a fall in blood pressure during the period of relaxation<sup>[9]</sup>.

**Discussion on oxygen saturation:** A slight fall of oxygen saturation was observed during the time of *Vega* which became normal after the *Vega*. As respiration is almost completely suspended so far ventilation of the lungs is concerned as the epiglottis is closed<sup>[10]</sup>, causing breath-holding for a specific period leading to a slight fall in Spo<sub>2</sub>.

**Temperature changes:** No significant changes were observed in temperature changes during *Vaman karma*. Barely (0.2 - 0.3°C) was observed which may be due to the physiological stress experienced by the patient during the procedure.

## CONCLUSION

We can conclude that *Vaman karma* can be performed safely without any complication if performed systematically with proper *Purva karma Pradhan karma* and *Paschat karma*. During the procedure, variations have been observed on heart activities, so proper examination should be done regarding the healthy functioning

of the heart with ECG and other physiological parameters. Even though in *Siddhi Sthana Charaka* has mentioned *Hridya roga* as contraindicated a wise physician with proper assessment and precautions can perform *Vaman karma*.

## REFERENCES

1. Pandit Parasurama Sastri, Sarangadhara Samhita, prat-ham khanda, deepanpachanadhyaya, Chaukhambha orientalia, Varanasi 2000, chapter 4 verse 7 Pg no.36.
2. Agnivesha, Charaka, Dridhabal Charaka Samhita, Kalpa Sthana, Madankalpa Adhyaya, 1/4, Bramhanand Tripathi, Charaka Chandrika Hindi Commentary, Vol. II, 6th ed. Chaukhambha Surbharati Prakashan, Varanasi, 1999; pp. 1072.
3. Dalhanacharya, sushruta Samhita, edited by Vaidya jadavji trikamji, vaman virechan sadhya updrava chikitsa, chapter 33 verse 12, chaukhambha orientalia, Varanasi, 2019, page.517.
4. B. A. Chaudhari, A. B. Chavan, Panchakarma Perception – An Overview, Journal of Ayurveda and Integrated Medical Sciences, JAIMS, May- June (2016); 1(1): 46-51.
5. P. Nigam. Role of virechana karma in Pakshaghata: Ayurvedic perspective. World journal of pharmaceutical and medical research, wjpmr. 2017;3(5):192-193.
6. Agnivesha, Charaka, Dridhabal Charaka Samhita, Sutra Sthana, kalpana chatushka, 15/11, Bramhanand Tripathi, Charaka Chandrika Hindi Commentary, Vol. II, 6th ed. Chaukhambha Surbharati Prakashan, Varanasi, 1999; pp. 1072.
7. Agnivesha, Charaka, Dridhabal Charaka Samhita, Sutra Sthana, kalpana chatushka, 15/11, Bramhanand Tripathi, Charaka Chandrika Hindi Commentary, Vol. II, 6th ed. Chaukhambha Surbharati Prakashan, Varanasi, 1999; pp. 1072.
8. T. Babic, K. N. Browning. the role of vagal neurocircuits in the regulation of nausea and vomiting. European journal of Pharmacology. Ejphar. (2014); 722:38-47.
9. C. Brooks, A. B. Luckhardt. The blood pressure during vomiting. American journal of physiology. ajplegacy. 1915 Jan 1;104-112.
10. C. Brooks, A. B. Luckhardt. The blood pressure during vomiting. American journal of physiology. ajplegacy. 1915 jan 1;104-112.

**Table 1:** Day-wise dose of Snehpana

Quantity of ghrita(ml)	Day 1	Day 2	Day 3	Day 4	Day 5
30	20	0	0	0	0
60	0	20	0	0	0
90	0	0	20	0	0
120	0	0	0	16	0
150	0	0	0	0	9
Total	20	20	20	16	9

**Table 2:** Composition of drugs administered as *Vaman aushad*

Drug	Quantity
Madanphala pippali choorna	10gm
<i>Yashtimadhu choorna</i>	5gms
<i>Saindhav</i>	5gms
<i>Pippali</i>	2gms
<i>Vacha</i>	2gms
Honey	50 gms

**Table 3:** Showing time is taken for sweating to occur.

Time is taken for sweating (minutes)	No of subjects
(1-5)	5
(5-10)	8
(10-15)	4
(15-20)	3
Total	20

**Table 4:** Showing Changes in Pulse rate

Pulse rate (per min)	Range		Mean	Standard deviation (SD)
	Minimum	Maximum		
Before administering medicine	90	100	95	7.07
At the onset of vaman vega	98	113	105.5	10.6
Just after (2-3 sec completion of vaman vega	148	172	160	16.97
During the whole procedure (in between vega while drinking vamnopag dravyas)	140	152	146	8.4
After 15 min of the last vega	92	104	98	8.4

**Table 5:** Showing changes in Systolic Blood Pressure

Systolic BP in mmofHg	Range		Mean	Standard deviation (SD)
	Minimum	Maximum		
Before administering vaman aushad	100	130	115	21.21
30-45 sec after each vaman vega	110	160	135	35.35
15 min after the last vega	100	140	120	28.28

**Table 6:** Showing changes in Diastolic Blood Pressure

Diastolic BP in mmofHg	Range		Mean	Standard deviation (SD)
	Minimum	Maximum		
Before administering vaman aushad	70	94	82	16.97
30-45 sec after each vaman vega	72	102	87	21.21
15 min after the last vega	70	90	80	14.14

**Table 7:** Showing Changes in Oxygen Saturation

Oxygen Saturation (Spo2%)	Range		Mean	Standard deviation (SD)
	Minimum	Maximum		
Before administering vaman aushad	97	100	98.5	2.12
30-45 sec after each vaman vega	86	98	92	8.48
15 min after the last vega	97	100	98.5	2.12

**Table 8:** Showing changes in temperature.

Temperature(°C)	Range		Mean	Standard deviation (SD)
	Minimum	Maximum		
Before administering vaman aushad	36.1	36.6	36.35	.35
30-45 sec after each vaman vega	36.0	36.8	36.4	.56
15 min after the last vega	35.9	36.7	36.3	.56

**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: Sumeet Saini et al: Physiological Changes During Vaman Procedure. International Ayurvedic Medical Journal {online} 2021 {cited July 2021} Available from: [http://www.iamj.in/posts/images/upload/1328\\_1333.pdf](http://www.iamj.in/posts/images/upload/1328_1333.pdf)