



## Research Article

## A CLINICAL STUDY TO ASSESS THE ROLE OF VASANTIKA VAMANA ON LIPID PROFILE AND WEIGHT IN HEALTHY INDIVIDUALS

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## ABSTRACT

*Panchkarma* is the most integral part of Ayurvedic management. It is precautionary, promotive, conservative, therapeutic and reconstructive therapy. As per Ayurveda, the seasonal variations have an impact on the biological systems eliciting into the accumulation and aggravation of specific *Doshas* in a particular season like *Kapha* accumulation in *Hemanta Ritu* and aggravation in *Vasanta Ritu*, *Pitta* accumulation in *Varsha ritu* and aggravation in *Sharada ritu* and *Vata* accumulation in *Grishma Ritu* and aggravation in *Pravrita Ritu*. *Vasantika Vamana* is carried out approximately in the month of *Chaitra - Vaishakha* for the expulsion of vitiated *Kapha dosha* for forbidding the impending ailments like allergic bronchitis, allergic rhinitis, allergic sinusitis, bronchial asthma, migraine, psoriasis, indigestion, anorexia, lethargy, hyperacidity, dyslipidemia, diabetes mellitus, obesity, acne vulgaris, eczema, urticaria, etc. Total of 57 volunteers were registered in this study out of which 45 were coped with classical *Vamana Karma*. The study was accomplished on 45 evidently healthy volunteers, between the age group of 18 and 60 years to observe the changes in lipid profile and weight before and after *Vamana* procedure. The outcome of the study was significant. There was also an improvement in appetite (*Agni*) of the volunteers after *Vamana*. Volunteers with irregular bowel habits showed significant improvement. On an average the minimum, maximum, total dose and total days of *Snehapana* were 36.40ml, 187.21ml, 578.59ml and 5.01 days respectively. Average quantity of *Madanaphala*, *Ksheera*, *Yashtimadhu Phanta* and *Lavanodaka* was 5.81g, 1130.29ml, 3202.9ml and 2489.13 ml respectively.

## INTRODUCTION

*Panchkarma* is the essence of Ayurvedic management. The therapy purifies the body and balances the humors in their natural state. It is precautionary, promotive, conservative, therapeutic and reconstructive therapy. *Panchkarma* therapy includes *Vamana*, *Virechana*, *Niruha basti*, *Anuvasana basti* and *Nasya*.<sup>[1]</sup> Ayurveda revolves around *Tridosha* theory. Target based treatment protocols are mentioned in Ayurvedic texts to cure the imbalance of *Tridosha* like *Vamana karma* for *Kapha dosha*, *Virechana karma* for *Pitta dosha*, *Vasti karma* for *Vata Dosha* predominantly.<sup>[2]</sup>

To maintain the health of healthy individual, preventive tools mentioned in Ayurvedic texts are *Dinacharya*, *Nishacharya*, *Ritucharya*, *Sadvritta* etc. Among these *Ritucharya* specifically, *Ritu Samshodhana* should be practiced in order to anticipate the seasonally aggravated respective *Doshas* to keep up the good health. The seasonal variations have an impact on the biological systems eliciting into the accumulation and aggravation of specific *Doshas* in a particular season like *Kapha* accumulation in *Hemanta ritu* and aggravation in *Vasanta ritu*, *Pitta* accumulation in *Varsha ritu* and aggravation in *Sharada ritu*, *Vata Dosha* accumulation in *Greesham Ritu* and aggravation in *Pravrita Ritu*<sup>[3]</sup>. Distinct phases of *Doshas* in different *Ritus* have been stated in detail in Ayurvedic texts. In Ayurveda, *Vamana Karma* is indicated for elimination of *Kapha dosha* not only in diseased state but also in healthy individuals in different physiological state where *Kapha dosha* is aggravated e.g., in *Vasanta Ritu* for maintenance of

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health and prevention of disease. *Vamana karma* is foremost procedure in management of disorders, where *Kapha* is predominant which in turn helps to prevent the diseases like bronchial asthma, allergic bronchitis, allergic rhinitis, sinusitis, migraine, dyslipidemia, diabetes mellitus, obesity, hyperacidity, indigestion, anorexia, lethargy, acne vulgaris, eczema, urticaria, psoriasis etc.<sup>[4]</sup> As due to the faulty lifestyle and *Kapha dosha dushti*, dyslipidemia and obesity are prevalent in society. This research is an attempt to create awareness to perform *Ritu Sanshodhan* and to observe the Lipid profile and weight before and after the *Vamana Karma* in *Vasant Ritu*. The observation was quiet significant and satisfactory.

### **Vasantika Vamana (Emesis in spring season)**

*Vamana* is a therapeutic procedure in which *Doshas* (toxins) are eliminated through mouth.<sup>[5]</sup> By performing *Snehana* and *Svedana*, *Kapha* and *Pitta dosha* from all over the body brought to *Amashaya* (stomach and duodenum) and then expelled out by inducing the emesis.<sup>[6]</sup> *Vamana Karma* is indicated for expulsion of *Kapha dosha*. *Kapha dosha* is aggravated in *Vasanta ritu*; hence *Vamana* is indicated in *Vasanta ritu* i.e., *Chaitra-Vaishakha* (approx. in the month of March and April).

**Aims and objectives:** To aware the society about seasonal biopurification and to evaluate the changes taking place in Lipid profile and Weight before starting *Snehapana* and after completion of the whole procedure of the *Vamana* including *Sansarjan Krama*. After the encouraging outcome, more advanced studies may be accompanied including large population in this direction.

## **MATERIAL AND METHODS**

### **Selection of the Volunteers**

**Consent:** Written and informed consent of the volunteers was taken at first.

The persons were examined on the basis of *Ekadasa pariksha vishyaya* mentioned in *Charaka Sutra* 15 and individuals indicated for *Vamana karma* were selected after having a written consent.

### **Inclusion Criteria**

- 1) Individuals fit for *Vamana Karma* as per classical text.
- 2) Individuals between 18-60 yrs of age.

### **Exclusion Criteria**

- 1) Individuals unfit for *Vamana* as per classical text.
- 2) Pregnant women and lactating mothers.
- 3) Menstruating woman.
- 4) Individuals suffering from hypertension, Type 1, Type II diabetes, cardiac disorder, renal disorder, alcoholic liver disease, chronic peptic ulcer, traumatic condition etc.
- 5) Individuals below 18yrs and above 60 yrs age.

**Investigations:** Weight and Lipid profile of all the volunteers were recorded before and after the procedure.

Haematology-CBC, ESR

Biochemistry-FBS, SGOT, SGPT, Serum Lipid Profile, B.Urea, S.Creatinine, ECG.

### **Protocol of Research**

- i) Selection of volunteer healthy individual fir for *Vamana Karma*.
- ii) Enrolment
  - 1) **Consent:** Selected individuals who gave their written consent were only enrolled.
  - 2) **Patient information sheet:** The details about procedure were shared with the individuals.
  - 3) **Case record performa:** The detailed case record performa was prepared to assess the status of individual before and after procedure.

**Vamana protocol:** It can be divided into three steps-

- *Purva Karma* (preoperative preparation)
- *Pradhana Karma* (operative procedure/induction of *Vamana*)
- *Pashchata Karma* (post operative care)

### **Purva Karma (Pre-operative Operation)**

#### **1. Deepana- Pachana (Digestive and Appetizers)**

*Chitrakadi Vati* 2TID with lukewarm water for two to three days was given.

**Abhyantara snehana (internal oleation):** *Shuddha goghrita* was given in increasing dose for three to seven days until *Samyaka snigdha lakshana* of *Snehana* were achieved.

**Abhyanga and Swedana (massage and fomentation):** After proper *Snehana*, *Sarvanga Abhyanga* and *Sarvanga swedana* was done for two times. One after achieving *Samyaka snigdha lakshana* of *Snehana* and one prior to *Vamana*.

#### **1. Aahara Vyavastha during Purva Karma**

- During the days of *Snehapana* volunteers were advised to take light, fresh, warm and easy to digest meals and to drink lukewarm water.
- On previous day of *Vamana* volunteers were advised to have *Khichadi* made from black gram with curd and sweets made out of milk like *Rasa malai*.

### **Counselling before Vamana**

- (i) Volunteers were informed about different steps involved in this procedure.
- (ii) A well-informed written consent was obtained.
- (iii) Volunteers were advised to relax and remove the negative thoughts.

**Pradhana Karma (For induction of Vamana)****Table 1: Average quantity of drugs used for Vamana Karma**

Drugs	Average
Dose of <i>Madanphala</i> (g)	4.36g
Quantity of <i>Ksheera</i> (ml)	1.833 lt.
Quantity of <i>Yavagu</i> (ml)	772.22 ml
Quantity of <i>Yashtimadhu phanta</i> (lt.)	1.26 lt.
Quantity of <i>Lavanodaka</i> (lt.)	1.960 lt.

**(I) Protocol of Vamana karma****a. Position of volunteers**

Volunteers were asked to sit on a comfortable *Vamana* chair of the height of knee joint.

**b. Examination of Vitals**

Pulse and blood pressure were recorded before, during and after completion of *Vamana Karma*.

**c. Vamana was induced in the early morning between 6 am and 9 am.**

- Volunteers were asked to drink *Ksheera* till *Aakantha Pana* approx. 2 litre or *Yavagu* (thin rice gruel) mixed with ghee was also given for some volunteers approx. 800g.
- Then volunteers were given *Vamana Yoga* - medicinal formulation (*Madanaphala Pippali* (powder of seeds of *Randia dumetorum*. variety) in the dose of patient's *Antarnakhmushti pramana*, soaked overnight in *Madhuyashti kwatha*. *Saindhava Lavana* (rock salt) and honey Q.S.) were added before intake of *Vamana yoga* to induce emesis.
- During the procedure, *Vamanopaga kashaya* (supportive decoction to continue vomiting) like hot infusion of *Yashtimadhu* (*Glycyrriza glabra*) or *Lavanodaka* after each *Vega* was administered repeatedly to support the act of vomiting till the appearance of *Pitta* (bile) in vomitus.

**(II) Observations during Vamana Karma**

During the procedure, after the administration of *Vamana yoga*, symptoms like Perspiration (*Swedapradurbhava*) indicates that the *Doshas* has started melting, and after that the patient would have horripilation (*Lomaharshena*) which shows that *Doshas* has started moving from its own position. In the third stage patient will have distension of the abdomen (*Kukshisamaadmapanena*) which shows that the *Doshas* having shifted from the intestine. Nausea and salivation (*Hrilaasaasayasravanabhyamapi*) which occur in the fourth stage are indicate that the *Dosha* has started moving upwards.<sup>[7]</sup> Further, Record of input, output and other observations were maintained.

**(III) Assessment of Vamana:** During *Vamana* in each *Vega* color, taste, odor, consistency, sound etc should be observed. To assess the quantity, nature of the vitiated *Dosha* and to assess the effect achieved after *Samshodhana*, *Charaka* for the first time told definite parameters. Chakrapani categorized them by naming as *Vaigiki*, *Maniki* and *Laingiki* and *Antiki* criteria.

**Vaigiki criteria:** If vomitus is coming from the stomach, projectile in nature should be considered as *Vega* and 8, 6 and 4 *Vegas* respectively called *Pravara*, *Madhyama* and *Hina shuddhi*. Moreover with projectile bouts, smaller bouts in every aspect than *Vega* (*Upavega*) were also recorded.

**Maniki criteria:** *Maniki* criteria were assessed on account of the quantity of elimination of *Doshas* like 2, 1½ and 1 *Prastha* for *Pravara*, *Madhyama* and *Hina shuddhi*, respectively (*Prastha* = 540ml).<sup>[8]</sup>

This is figured out by calculating the total quantity of output minus the total quantity of input.

**Laingiki criteria:** It was assessed as per the *Samyaka lakshana* of *Vamana*.

**Antiki criteria:** *Vamana* should be advised to continue till the appearance of *Pitta* in the vomitus.

**Paschchata Karma**

After completion of *Vamana karma*, volunteers were kept under observation. After *Samyaka vama*, volunteers were advised to inhale the medicated smoke, gargle and wash mouth, hands and feet, then to rest for about an hour. Later they were guided about *Aahara- Vihara* restrictions which are considered as "*Pashchata karma*" for some days till achieving *Agnideepti* and *Bala*.

**Samsarjan krama** - It has to be planned on the basis of type of purification achieved by *Vamana* i.e., for *Pravara*, *Madhyama* and *Hina Shuddhi*; seven, five and three days respectively. *Peyadi Samsarjana krama* is advised to all the volunteers as dietary regimen.

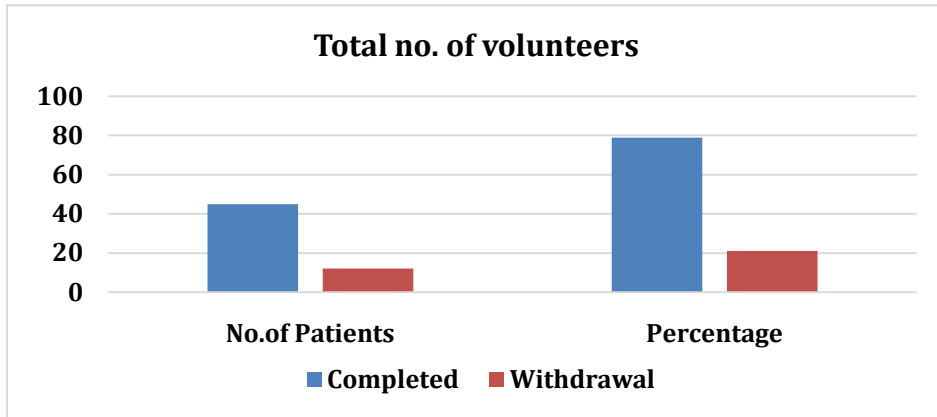
**Clinical Study****MATERIAL AND METHODS**

Total 45 volunteers who were fit for *Vamana Karma* were selected from OPD & IPD of *Panchakarma*, RGGPG Ayurvedic College and Hospital, Paprola, H.P.

**OBSERVATION AND RESULTS**

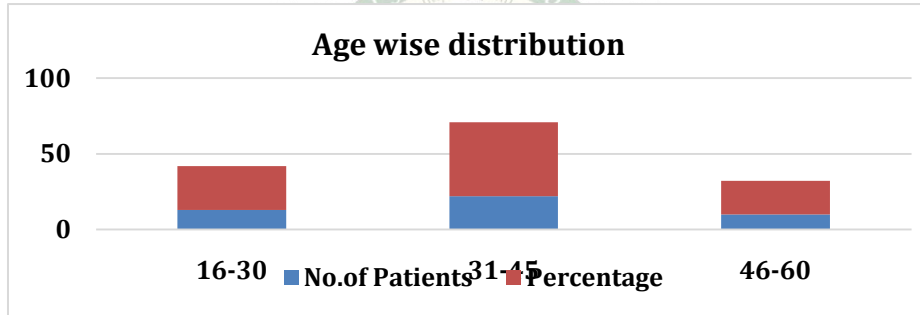
**Table 1: Distribution of total no. of volunteers**

Type	No. of Volunteers	Percentage
Completed	45	78.9
Withdrawal	12	21.05



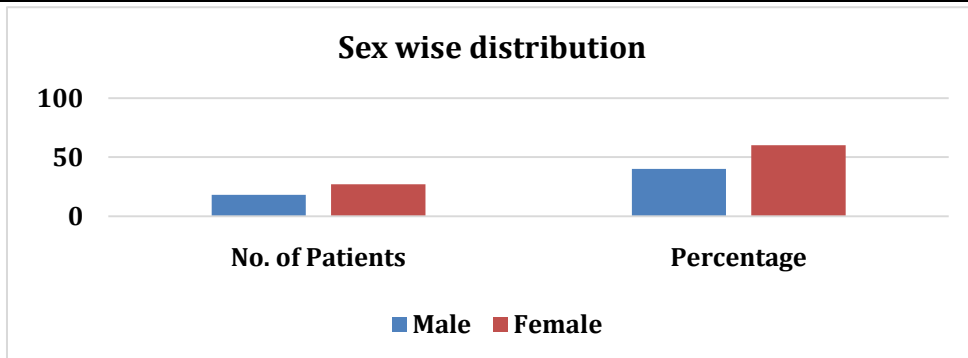
**Table 2: Age wise distribution**

Age	No. of Volunteers	Percentage
16-30	13	28.8
31-45	22	48.8
46-60	10	22.2



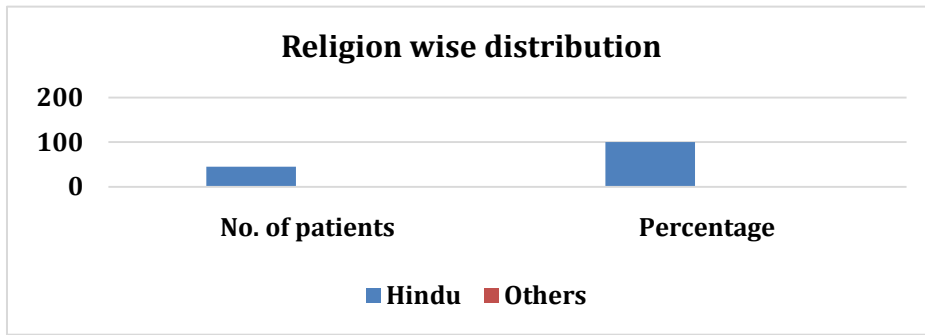
**Table 3: Sex wise distribution**

Sex	No. of Volunteers	Percentage
Male	18	40
Female	27	60



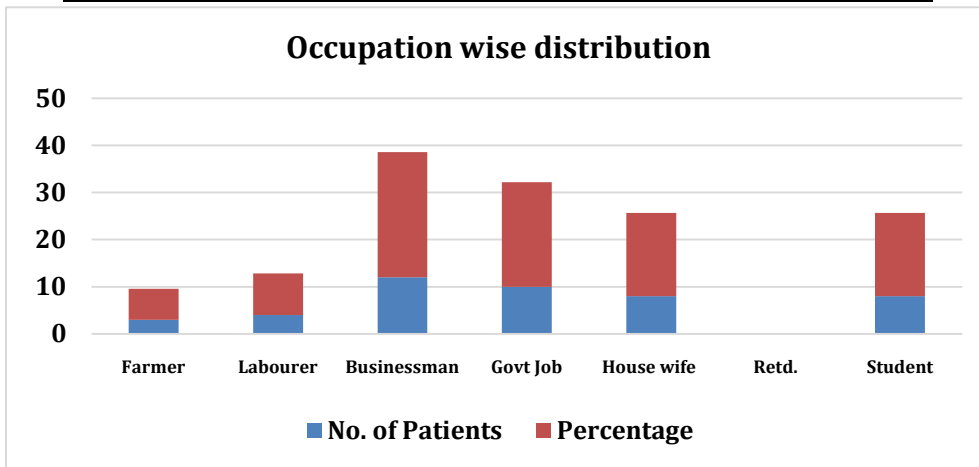
**Table 4: Religion wise distribution**

Religion	No. of volunteers	Percentage
Hindu	45	100
Others	0	0



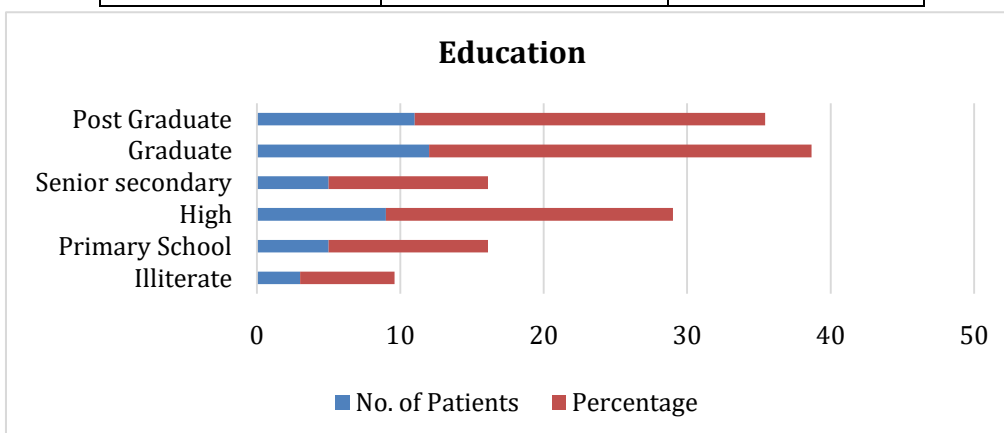
**Table 5: Occupation wise distribution**

Occupation	No. of Volunteers	Percentage
Farmer	3	6.6
Labourer	4	8.8
Businessman	12	26.6
Govt. Job	10	22.2
House wife	8	17.7
Retd.	0	0
Student	8	17.7



**Table 6: Education wise Distribution**

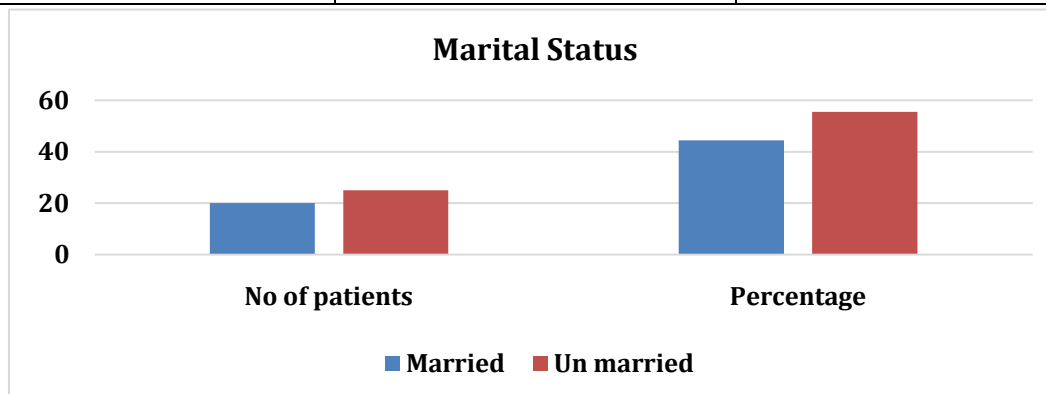
Education	No. of Volunteers	Percentage
Illiterate	3	6.6
Primary School	5	11.11
High	9	20
Senior secondary	5	11.11
Graduate	12	26.66
Post Graduate	11	24.44





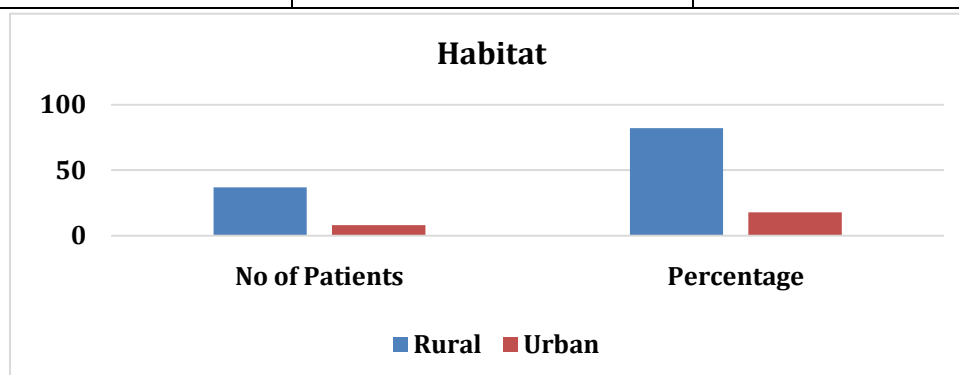
**Table 7: Marital status wise distribution**

Marital status	No of volunteers	Percentage
Married	20	44.4
Un married	25	55.5



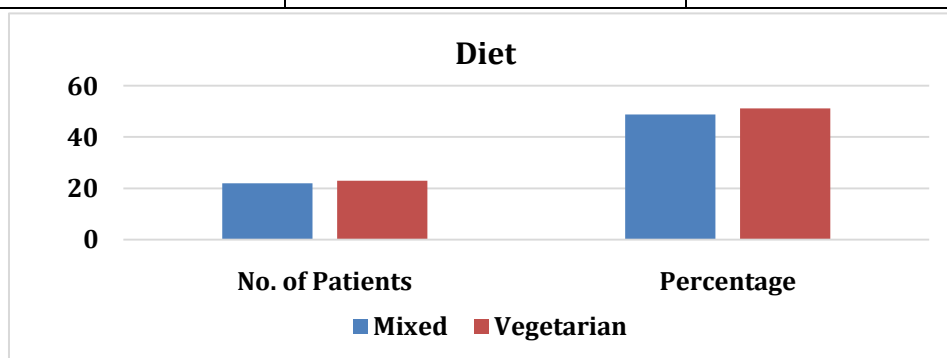
**Table 8: Habitat wise Distribution**

Habitat	No of Volunteers	Percentage
Rural	37	82.2
Urban	8	17.7



**Table 9: Dietary habits wise distribution**

Diet	No. of Volunteers	Percentage
Mixed	22	48.8
Vegetarian	23	51.1



**Table 10: *Kostha* wise distribution**

<i>Kostha</i>	No. of volunteers	Percentage
<i>Mridu</i>	7	15.5
<i>Madhyam</i>	24	53.3
<i>Krura</i>	14	31.1

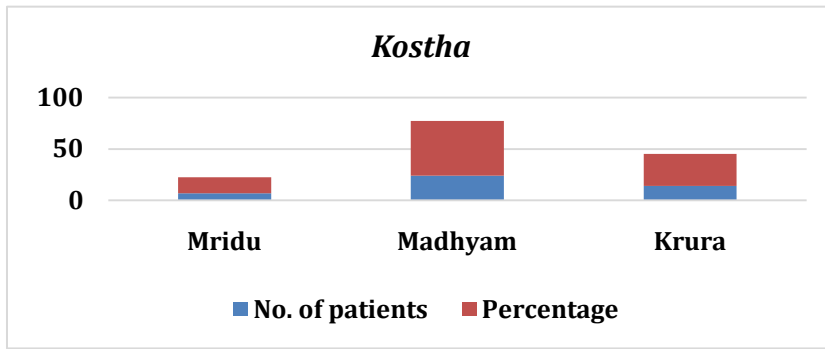


Table 11: Appetite wise distribution

Appetite	No. of volunteers	Percentage
Normal	28	62.2
Increased	6	13.3
Decreased	11	24.4

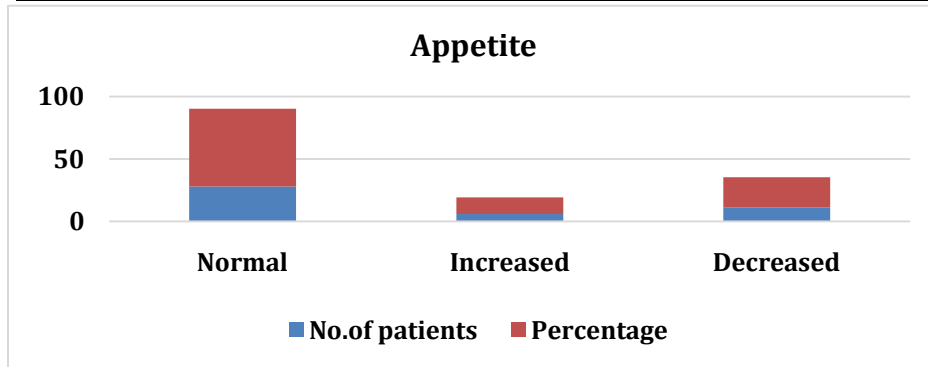


Table 12: Deha Prakriti wise distribution

Deha prakriti	No of volunteers	Percentage
Vata pittaja	10	22.22
Vata kaphaja	29	64.4
Pitta kaphaja	6	13.3

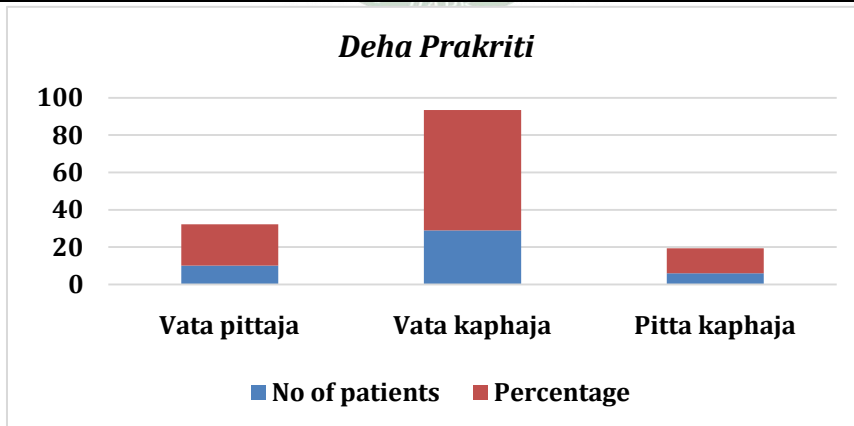
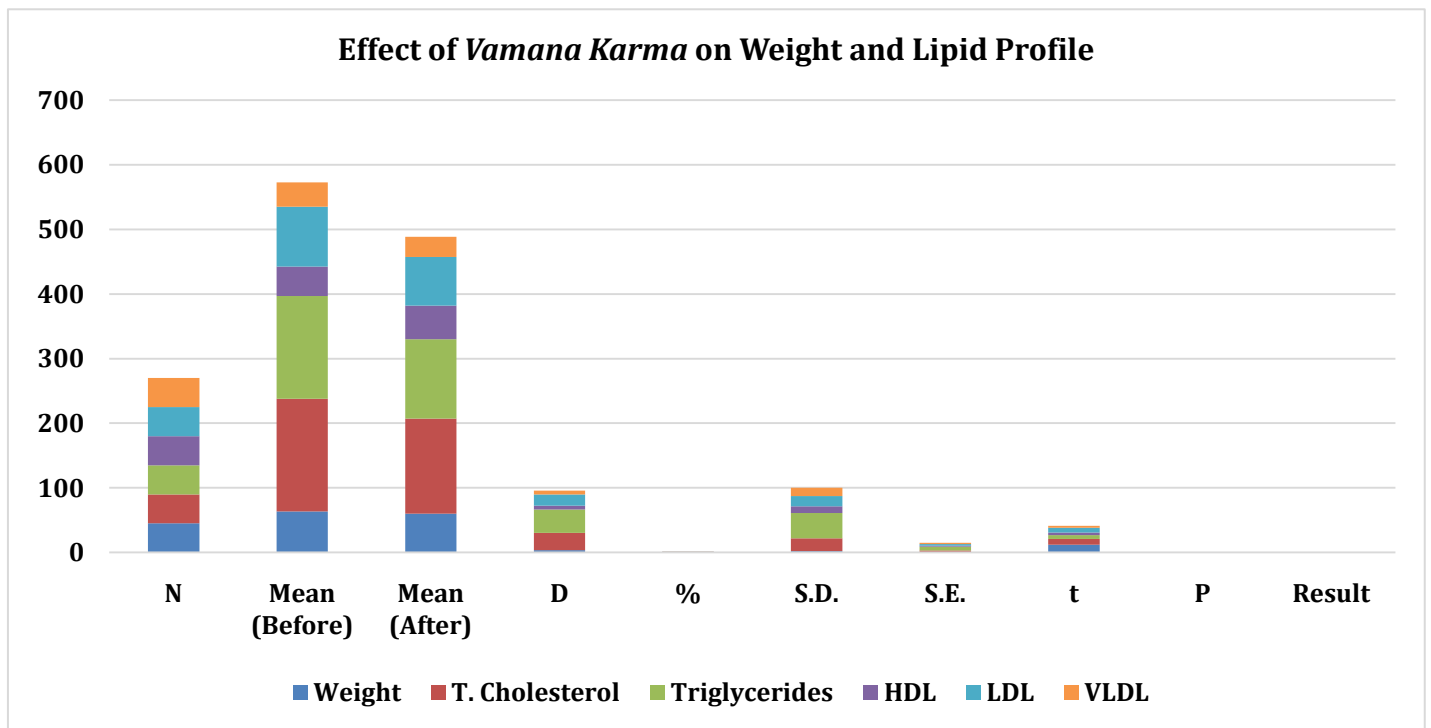


Table 13: Illustrated the Effect of Vamana Karma on Weight and Lipid Profile

Parameters	N	Mean (Before)	Mean (After)	D	%	S.D.	S.E.	t	P	Result
Weight	45	63.5	60.1	3.4	5.35%	1.9	0.28	12.0	<0.001	HS
T. Cholesterol	45	174.2	147.2	26.9	15.44%	20.2	3.01	8.9	<0.001	HS
Triglycerides	45	159.1	122.7	36.3	22.8%	39.1	5.83	6.2	<0.001	HS
HDL	45	45.7	51.9	6.1	13.34%	10.4	1.55	3.9	<0.001	HS
LDL	45	92.7	75.3	17.3	18.66%	15.6	2.33	7.4	<0.001	HS
VLDL	45	37.4	31.4	5.9	15.77%	12.8	1.91	3.1	=0.003	S



- **Weight:** Initial mean score before was 63.5 which was reduced to 60.1 after *Vamana* procedure. The relief was 5.35% which was statistically highly significant at  $P < 0.001$  ( $t = 12.0$ ).
- **Total Cholesterol:** Initial mean score before was 174.2 which was reduced to 147.2 after *Vamana* procedure. The relief was 15.44% which was statistically highly significant at  $P < 0.001$  ( $t = 8.9$ ).
- **Triglycerides:** Initial mean score before was 159.1 which was reduced to 122.7 after *Vamana* procedure. The relief was 22.8% which was statistically highly significant at  $P < 0.001$  ( $t = 6.2$ ).
- **HDL:** Initial mean score before was 45.7 which was reduced to 51.9 after *Vamana* procedure. The relief was 13.34% which was statistically highly significant at  $P < 0.001$  ( $t = 3.9$ ).
- **LDL:** Initial mean score before was 92.7 which was reduced to 75.3 after *Vamana* procedure. The relief was 18.66% which was statistically highly significant at  $P < 0.001$  ( $t = 7.4$ ).
- **VLDL:** Initial mean score before was 37.4 which was reduced to 37.1 after *Vamana* procedure. The relief was 15.77% which was statistically significant at  $P = 0.003$  ( $t = 3.1$ ).

## DISCUSSION

*Deepana* and *Pachana* digest the *Ama* and reinforces the *Agni*.

*Snehana* and *Swedana* helps in liquefaction of the *Doshas* and increases the volume and makes the *Doshas* free from their adherence and disintegrate. These pre-operative procedures help to mobilize the *Doshas* from *Shakha* to *Koshtha*.<sup>[10]</sup>

*Vamana* was persuaded in the early morning between 6 am to 9 am i.e., *Kapha kala*. Some

Volunteers were given *Akantha pana* of milk approx. 2 litre, some were taking *Yavagu* (thin rice gruel) mixed with ghee approx. 800g.

Then volunteers were given *Vamana Yoga* - medicinal formulation *Madanaphala Pippali* (powder of seeds of *Randia dumetorum*) in the dose of patient's *Antarnakhmushti pramana*, soaked overnight in *Madhuyashti kwatha*. *Saindhava lavana* (rock salt) and honey Q.S.) were added before intake of *Vamana yoga* to induce emesis. This method is used safely in our routine practice and generally devoid of complications and so it was used for persuading *Vamana*.

*Peyadi samsarjana karma* was advised to enhance the *Agni* gradually, to support the *Prana* and nurtures the body with carbohydrates, proteins and fats one after one to avoid the *Agnimandhya*.

On an average minimum, maximum and total quantity of *Snehapana* was 30.30ml, 180.40ml and 486.66ml respectively because the maximum numbers of volunteers were having *Samagni*. Average days of *Snehapana* were 5.2 days as the maximum number of volunteers were having *Madhyama Koshtha*.

On an average difference of quantity between output and input was 216.6ml, which indicate toward the *Avara shuddhi* whereas the average number of *Vega* were 7 showing *Pravar shuddhi*. 88.88% of volunteers had *Pittant Vamana* and assessment of *Vamana karma* by *Laingiki* criteria showed that majority of the volunteers had *Kramat Doshanirharana*, *Hridaya Parshva Murdha* and *Kantha Shuddhi*, *Indriyaprasada*, *Laghuta*, which showed that *Samyaka vamana karma* occurred in most of the volunteers. This showed that *Vasant Ritu* helps in conduction of *Vamana karma* appropriately as



majority of the volunteers had *Pravara shuddhi* without any complications. The average days of *Sansarjana Krama* were 6.9 days.

As no major complications were found, hence the drugs and the total procedure may be considered as safe.

The main aim of the study was to aware the society about the health benefits of *Vasantika Vamana*. Simultaneously, it was observed that overall wellbeing of volunteers was improved. Statistically significant changes in weight and lipid profile were observed.

The present study was carried out on 45 evidently healthy volunteers, between the age group of 18 and 60 years to observe the changes before and after *Vamana* procedure. There was an improvement in appetite (*Agni*) of the volunteers after *Vamana*. Volunteers with irregular bowel habits showed significant improvement.

### CONCLUSION

*Panchakarma* is the most integral part of Ayurvedic management, which can be practiced as is precautionary, promotive, conservative, therapeutic and reconstructive therapy as per the need. Ayurveda affirms to practice *Vamana* in *Vasanta ritu*, *Virechana* in *Sharad Ritu*, *Basti* in *Varsha ritu* for maintenance of health and prevention of disease. For the persons with *Kapha* and *Kapha-Pitta* constitution and volunteers suffering from *Kapha* disorders and associated *Pitta* disorders or diseases originating or settled in the place of *Kapha*, *Vasantika vamana* is highly beneficial. If the whole protocol regarding *Vamana karma* is followed then no complications will arise and also patient got an extraordinary health benefits.

Thus, it can be concluded that, *Vamana* is a safe *Panchakarma* procedure if persuaded carefully.

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