



## Research Article

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### EFFECT OF VAMANA KARMA IN THE MANAGEMENT OF STHOULYA WITH SPECIAL REFERENCE TO DYSLIPIDEMIA: A CLINICAL STUDY

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#### ABSTRACT

Background: Cardiovascular diseases are one of the leading causes of worldwide mortality. Dyslipidemia is a metabolic disorder that can be recognized as elevated or declined lipid levels or both. It is a significant risk factor in atherosclerosis and coronary heart disease initiation and progression. The association of dyslipidemia with Type2 diabetes mellitus (DM) as comorbidity for cardiovascular events. Aims and Objectives: The objective of the present study is to evaluate the efficacy of Vamana karma in the management of dyslipidemia. Materials and Methods: A total of 15 patients in the age group 20-60 years were included in the study. Subjects were administered Vamana karma with Madanaphala pippali Churna, Vatsaka beeja and Kovidara Kashaya. Results: The data shows a significant effect of therapy on weight, BMI, Waist Hip ratio, total cholesterol, LDL, LDL/HDL ratio. It shows Statistically substantial changes in Jaranashakti, Abhyavaranashakti, Ruchi, Vata mutra purisha visarga, Sukhenach pratibodhanam. Conclusion: Vamana karma is a safe and highly effective therapy in managing dyslipidemia. Vamana Karma is an effective therapy for reducing total cholesterol, triglycerides, LDL and LDL/HDL ratio.

**Keywords:** Vamana, dyslipidemia, kovidara Kashaya, Vatsaka beeja, Sthoulya

#### INTRODUCTION

Dyslipidemia is a disorder of lipoprotein metabolism. The disorder can manifest as an elevation of plasma cholesterol, triglyceride or both or a low HDL level or all three together<sup>1</sup>. WHO reported that high cholesterol level is one of India's leading non-communicable disease-related risk factors. Raised cholesterol is estimated to cause 2.6 million deaths (4.5% of total)<sup>2</sup>. The prevalence of dyslipidemia [defined according to National Cholesterol Education Programme (NCEP) guidelines] in Indians is very high, with 79% of subjects having at least one lipid abnormality, with decreased high-density lipoprotein cholesterol (HDL-C) levels in 72.3% subjects, hypertriglyceridemia in 29.5% subjects and elevated low-density lipoprotein cholesterol (LDL-C) levels in 11.8% of subjects<sup>3</sup>.

Sthoulya can be correlated with obesity in Ayurveda, and It is one of the Santarpanjanya Vyadhi (Diseases caused by overnutrition) described by Acharya Charaka<sup>4</sup>. Sthoulya (Obesity) and Medovruddhi are Kapha Pradhan Vyadhi. Vamana (Therapeutic Emesis) among Panchakarma is specially indicated for Santarpanjanya and Kapha Pradhan Vyadhi like Sthoulya<sup>5</sup>.

#### MATERIALS AND METHODS

A total of 15 subjects diagnosed with dyslipidemia were included in this clinical study from the outpatient & inpatient department Panchakarma of All India Institute of Ayurveda, New Delhi, India. The Institutional Ethics Committee of All India Institute of Ayurveda, New Delhi, approved the Ethical Clearance, with reference number IEC-AIIA/2019/PG-140 and registered under Clinical Trials Registry, India (CTRI) and the registration number of the trial was CTRI/2020/03/023742. Informed consent was obtained from the patients before starting the intervention.

#### Inclusion Criteria

- Age group 25 - 60 years of both gender
- SERUM CHOLESTEROL  $\geq$ (201 MG/DL)
- SERUM TGLS  $\geq$ (161 MG/DL OR MORE)
- SERUM LDL  $\geq$ (131 MG/DL OR MORE)
- SERUM HDL  $\leq$ (BELOW 40 MG/DL)
- serum VLDL  $\geq$ (41 mg/dl or more)
- Subjects fit for Vamana Karma

#### Exclusion Criteria

- Systemic illness will interfere with the course of procedure.
- Who is not fit for Vamana Karma.

#### Investigations

- Complete lipid profile
- RBS

**Study Duration:** The study lasted for 23 days with Deepana Pachana-7 days, Snehapana (Oral administration of fats)-7 days, Sarvanga Abhyanga (external oleation) and Bashpa Swedana (Sudation therapy)-1 day, Vamana-1 day, Samsarjana Krama (diet regimen)-7 days.

#### Purva karma

**Deepana-pachana** - It has been carried out with Panchakola Churna 3 gm thrice a day with lukewarm water before food.

**Snehapana** - Achha Sneha (Krishna Tila Taila) was given for Abhyantara Snehapana (Internal oleation) in increasing dose according to Koshtha of the patient till the appearance of Samyaka snigdha Lakshana. During Snehapana, patients were

advised for having light and easily digestible food like green gram soup, dal, and boiled rice.

**Abhyanga**-Sarvanga Abhyanga was done with Krishna Til Taila for 2 days.

**Swedana**- Bashpa Swedana was done with Dashmula Kwatha for 2 days.

**Diet on the previous day of Vamana:** Patients were advised to have plenty of milk, curd, sweets like sesame and Jaggery Laddu, rice with curd.

**Pradhana karma**

It can be divided into the following steps:

- **Aakanthapana:** Milk was given full of stomach.

• **Vamaka yoga:** Madanaphala pippali churna (3 gm), Vatsaka Beeja churna (3 gm), and Kovidara Kashaya mixed with Madhu (Honey), Saindhava (Rock salt) was used as Vamaka Yoga have been taken. Madanaphal (*Randia dumetorum*) is the best among all Vamakadravyas (a drug that induces vomiting) because of its Anapayitva property (devoid of complications).

**Vamanopaga dravyas:** Kovidara (*Bauhinia purpurea*) Kashaya and Saindhava Lavana was used. The process was continued till Samyaka shuddhi lakshana, and Pittant was observed.

**Pashchata Karma**-Assessment was done based on Laingiki Shuddhi, Vaigiki Shuddhi, Antiki Shuddhi and Maniki Shuddhi criteria. Peyadi Samsarjana Krama was advised (for 3-7 days) according to Pravara, Madhyama and Avara Shuddhi occurred.

**Table 1: Demographic Data**

Factor/Parameter	%
Age group 20-30	33.3
Gender (Female)	60
Married	53.4
Diet (Mixed)	80
Education (Graduate)	50
Prakriti (Vata Kaphaja)	53.4
Satva(Madhyama)	60
Satmya(Madhyama)	80
Samhanana(Madhyama)	60
Sara (Madhyama)	60
Addiction	6.7(alcohol)
Vyayama (Irregular)	73.3
Nidra (Prabhuta)	46.3
Agni (Vishama)	26.7 (Each Samagni, Vishamagni, Tikshnagni)
Antiki Shuddhi (Pittanta)	79.99
Vaigiki Shuddhi (Pravara)	46.66

**Table 2: Effect of Vamana Karma on Objective parameters**

Parameter	BT	AT	Mean difference	% change	S.D	t value	P-value
Weight	76.56	72.03	4.53	5.91	1.394	12.58	.000
BMI	28.5	26.42	2.08	7.29	1.186	6.81	.000
Waist hip ratio	0.908	.8907	.018	1.98	.012	5.77	.000
Total cholesterol	210.8	167.7	43.04	20.41	30.55	5.45	.000
Triglycerides	165.5	119.8	45.76	27.65	51.53	3.43	.004
HDL	46.86	46.033	.833	1.78	9.066	.356	.727
LDL	119.4	95	24.4	20.43	19.86	4.75	.000
VLDL	29.64	23.31	6.33	21.35	8.14	3	.009
TC/HDL Ratio	4.96	3.71	1.25	25.20	1.52	3.16	.007
LDL/HDL ratio	3.315	2.61	.705	21.26	.792	3.44	.004
RBS	98.30	97.01	1.29	1.31	6.86	.730	.477

BMI- Body mass index, HDL-High density lipoprotein, LDL-Low density lipoprotein, VLDL- Very low-density lipoprotein, TC/HDL- Total cholesterol to High-density lipoprotein ratio, LDL/HDL- Low-density lipoprotein to High-density lipoprotein ratio, RBS- Random blood sugar, BT- Before treatment, AT- After treatment, SD.- Standard Deviation.

**Table 3: Effect of Vamana Karma on Subjective Parameters**

Parameter	BT	AT	Mean difference	% change	S.D	t value	P-value
Chala-Sphika-Udara-Stana Vridhhi	2	1.26	.73	61	.46	6.20	.000
Javoparodha	1.8	1.13	.67	60.9	.48	5.29	.000
Atinidra	1.8	1.46	.33	79.31	.61	2.09	.055
Swedadhikya	2.93	2	.93	65.31	.45	7.89	.000
Angadaurgandya	1.67	1.26	.40	73.77	.63	2.44	.028
Angagauravata	2	1.200	.80	58	.41	7.48	.000
Pipasadhikya	3.2	2.667	.53	80.14	.83	2.47	.027
Kshudhadhikya	1.8	1.600	.20	87.08	.67	1.14	.271

BT- Before treatment, AT- After treatment, SD.- Standard Deviation.

## OBSERVATIONS AND RESULTS

The data obtained in a clinical study is subjected to statistical tests and analysed in two parts viz. Objective Parameter and Subjective Parameter. Demographic details are shown in Table 1.

The effect of Vamana karma on objective parameters is shown in Table 2. As shown in Table no. 2, after Vamana Karma, there is a highly significant reduction in weight, BMI, waist-hip ratio, total cholesterol, and LDL. Also, there is a considerable reduction in triglycerides, total cholesterol/HDL ratio, LDL/HDL ratio.

The effect of Vamana karma on subjective parameters is shown in Table 3. Table 3 shows a highly significant reduction in Chala-Sphika-Udara-Stana vriddhi, Javoparodha, Swedadhikya, Angagauravata after Vamana Karma. It offers a statistically significant decrease in Angadauragandhya and Pipasadhikya after Vamana Karma.

## DISCUSSION

### Vamana Karma

This Clinical study was conducted on 15 subjects diagnosed with Dyslipidemia (Sthoulya). The results after Vamana Karma are highly significant in both subjective and objective parameters.

Vamana karma is the safe and best therapy for eliminating morbid Kapha Dosh. Hence used in the treatment of Santarpanotha Vyadhi, Kaphaj Vyadhi and Pittanubandhi Kaphaj Vyadhi<sup>6</sup>. Sthoulya being Bahudosh Lakshana, Samshodhan<sup>7</sup> therapy is the treatment of choice.

Vamana is indicated explicitly for the elimination of Kapha Dosh. Medo Dhatu belongs to Kapha Varga, thus directly affecting Medo dhatu/fat tissue and thus decreasing lipid levels. Not only on Kapha Dosh, but Vamana also brings Pitta to a state of normalcy. Pitta is responsible for all the digestion (Paka) and metabolism (Parinama) in the body, and dyslipidemia is a disorder of deranged lipid metabolism, which could be due to the disturbed state of Pitta.

Hence, by controlling the vitiated state of Pitta, Vamana may regulate the mal production of lipids and brings a state of balance. Furthermore, the main seat of Pitta is Yakrita (liver) which controls the formation of lipids, and Vamana Karma, having a direct effect on Pitta, in turn, may regulate liver functioning, which contains the whole metabolism of lipid formation and excretion<sup>8</sup>.

### Madanaphala

Madanaphala is the safe and best Vamaka dravya among all Vamak dravya, explained by Acharya Charaka. It does not cause any side effects during emesis. It has antibacterial, antiallergic, anti-inflammatory<sup>9</sup>, analgesic and immunomodulatory activity<sup>10</sup>.

### Vatsaka Beeja

Vatsak beeja has Kaphaghna property and is especially indicated in Sukumar purusha (delicate person). According to Bala of a patient, it does not harm the patient if used in a specific quantity. Also, it is indicated for the Hrudroga<sup>11</sup> as dyslipidemia is one of the causes for atherosclerosis leading to heart disease, so it has been taken for Vamana karma. In the study conducted to evaluate the efficacy of methanol extracted seed of *Holarrhena antidysentrica* in Streptozotocin-induced diabetic rats, the anti-hyperlipidaemic activity was also measured. The serum levels of

TC, TAG, LDL, VLDL and HDL were measured. The results were very promising<sup>12</sup>.

### Kovidara

Kovidara is one of the Vamanopaga drugs described by Acharya Charaka. The oral administration of Methanol Extract of *Bauhinia purpurea* showed a decrease in TC, TG, LDL-c and an increase in HDL-c<sup>13</sup>. In India, the bark is extensively used for glandular disease and poison antidote<sup>14</sup>.

## CONCLUSION

Vamana Karma is highly effective in correcting the deranged lipid levels, i.e. dyslipidemia. Vamana karma effectively reduces weight, BMI, total cholesterol, Triglycerides, LDL, VLDL and total cholesterol/HDL ratio, LDL/HDL ratio. Vamana is a safe and effective therapy in the management of dyslipidemia.

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