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Study of Hypolipidemic Effect of a Polyherbal Compound "Suhridaya" in Preventive Cardiology

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Abstract

Ayurveda is the oldest life science and health care system of ancient India. It is valuable for prevention of diseases and their treatment. It is based on Vedic knowledge and has own concepts and philosophy. It is still in clinical practice in Asian countries, mainly in India.

Hriday is described in details through sutras at some texts. Somewhere hriday is described as the heart and somewhere it is described as the brain. Its function i.e. kriya and morphology i.e. swaroop are clearly described as artha and mahat. It is said to be like a lotus bud i.e. pundreek; it is of one's own fist in size. It is a very vital organ (one of the three specific marmas i.e. trimarma). It is connected with blood carrying channels (rasavaha srotas), with oxygen carrying blood (pranavaha srotas), it is mentioned as the seat of chetana i.e. consciousness (manovaha srota), it is also said to be the place of para ojus (the atriopeptide which is vital and immune regulatory,) and it is responsible for circulation of oxygen loaded blood to entire body including heart itself.

The vatic hriroga which may be correlated with ischemic heart disease (cardiovascular disease) are common in young and obese population of our country. It is associated with dyslipidemia due to various factors and co-factors. A clinical study was done from January 2025 to June 2025 with an herbal compound, which has hypolipidemic effect and acts as a cardiac tonic. The trial drug 'Suhridaya' consists of eight well documented herbs viz. arjuna, aswagandha, amalaki, punarnava, gokshura, pushkar mula, jatamanshi and haritaki. These herbs have established hypolipidemic and antihypertensive effects.

For the study, 100 patient were randomly selected having dyslipidemia and who had risk of developing cardiac disease. They were given the trial drug in the dose of 1gm twice daily after meal for three months. The data was collected before, during and after the study and analyzed statistically. Significant reduction in serum cholesterol and serum triglycerides was observed at the end of the study.

Keywords: Cardiovascular Disease, Dyslipidemia, Hridroga, Cholesterol, Triglycerides, Para Ojus, Atrio-peptide

Introduction

Ayurveda is the unique science and philosophy for a healthy and fruitful life. It gives information for prevention of diseases and protection of our life. The risk factors, symptoms and the treatment for different diseases including hridroga are described in Ayurvedic classics. Now a days, the risk factors and the symptoms of hridroga have been changed due to various modifiable and non-modifiable factors, including environmental pollution. According to recent research data coronary artery disease (CAD) is the leading non-communicable disease responsible for deaths globally. The overall prevalence of CAD (the most common hridroga) is estimated roughly 11% in urban and 6% in rural area, it is like an epidemic in India. The registrar general of India reported that CHD lead to 17% of total deaths and 26% of adult deaths increased up to 32%.

Recent studies in India have reported increasing CHD prevalence from 1% to 10% in urban and 4% to 6% in rural population. The case control studies have reported that the causes for CHD in India are dyslipidemia, smoking, diabetes, hypertension, abdominal obesity and physical inactivity. The increasing trend is also due to industrialization and urbanization, with relative

life style changes which is called epidemiological transition. In India premature CHD are a big burden, needs preventive measures. The goal of this study is to manage dyslipidemia which is the major factor for ischemic heart disease.

In India, more than 10.5 million deaths occur annually and out of this 20.3% are due to CHD. In India the age adjusted CVD mortality rate are 349/ 100,000 among men. Modifiable factors are smoking, smoke-less tobacco, alcohol, sedentary lifestyle, unhealthy diet, high blood pressure, high lipids, obesity and diabetes. The long term care can reduce the rate of prevalence. Low fruit intake and low vegetable intake are also responsible for risk; fast food, trans fat and processed food are new in trend responsible for CAD. Because these increase the lipids. Genetic factors, especially C4D gene is identified for CAD. Thus, for prevention, clinical investigation, smoking and alcohol restriction, physical activity and yoga are very much essential.

Drug Review

The polyherbal compound, 'SUHRIDAYA' consists of the following scientifically studied herbs, in a new composition for this study.

Table 1:

S. No.	Ayurvedic name	Botanical name	Part used	Amount	Reference
1.	Arjuna	Terminalia arjuna (Roxb.)W.&A.	Bark	200 gm	YR/BR
2.	Amalaki	Emblica officinalis Gaertn.	Fruit	200 gm	API
3.	Haritaki	Terminalia chebula Retz.	Fruit	200 gm	BR
4.	Punarnava	Boerhavia diffusa	Whole plant	50 gm	YR/BR
5.	Puskarmool	Inula racemose	Root	50 gm	YR/BR
6.	Gokshura	Tribulus terrestris	Fruit	50 gm	YR
7.	Jatamanshi	Nardostachys jatamanshi DC	Root	50 gm	YR
8.	Aswagandha	Withania somnifera	Root	200 gm	BR

Powdered and properly mixed, then tablets made with 500 mg/ tablet. Preservatives used sodium benzoate in recommended dose. No artificial color added.

Dose and Duration:

2 gm (4 tablets)/ day i.e. 2 tablets twice daily after meal given with water for three months.

Clinical Study

Aim: To see the hypolipidemic and hypotensive effect of SUHRIDAYA in mild to moderate cases to 100 patients without any established cardiac pathology.

Material and Method

Subject Sample: A total number of 100 patients were selected for the study from OPD of Dr. O. P. Gupta's clinic for a period of three months from January 2025 to March 2025.

Selection of Cases: The cases were selected regardless of their sex, socio-economic status and who fully satisfied the inclusion criteria.

Inclusion Criteria

1. Serum cholesterol > 250 mg/dl
2. Serum triglyceride > 180 mg/dl
3. Age < 30 – 70 years
4. BMI > 25 (overweight)
5. Abdominal obesity prominent
6. Normal troponin I and ECG
7. Symptoms of heaviness, palpitation, dyspnea.

Exclusion Criteria

1. Patients suffering from coronary artery disease, chronic obstructive pulmonary disease.
2. Having angioplasty, myocardial infarction, congestive heart failure, chronic kidney disease.
3. Having hypothyroisism, tuberculosis, cancer or any gastro-intestinal operation.

Trial Methodology

The trial methodology adopted in the study was open trial without any control.

a. All the patients were explained about the drug and the study. Then the consent forms were signed and they were registered for the study.
b. All registered patients were given the drug in the dose of 2 gms per day in two divided doses i.e. 1 gm twice daily after meal, for three months. The lipid profiles were measured and recorded before and after the study.
c. The patients were advised diet modifications and restriction to smoking, alcohol, common salt. They were asked to do moderate exercise and yoga for 20 minutes every day.
d. The blood pressure was monitored and recorded at the beginning of the study and at the interval of one month. In case of any problem during the study, they were advised to visit the clinic.
e. All the patients were advised to take their regular medicines except statins.

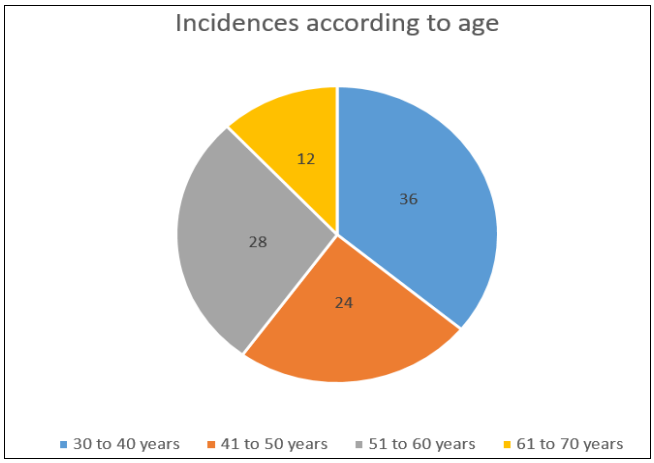
Assessment of Result

The assessment of the study was determined by before and after records. Significant observations were recorded every month in all the 100 patients.

A. Demographic Profile

Table 2:

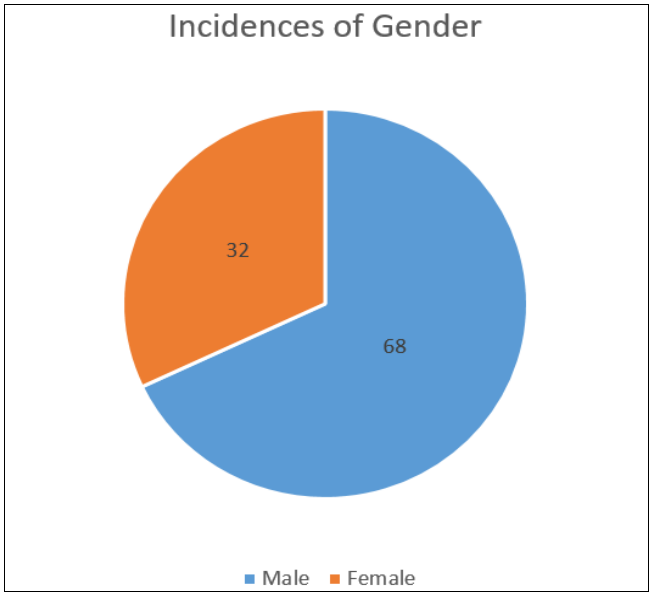
Age group	Number
30 to 40 years	36
41 to 50	24
51 to 60	28
61 to 70	12



B. Incidences of Gender

Table 3:

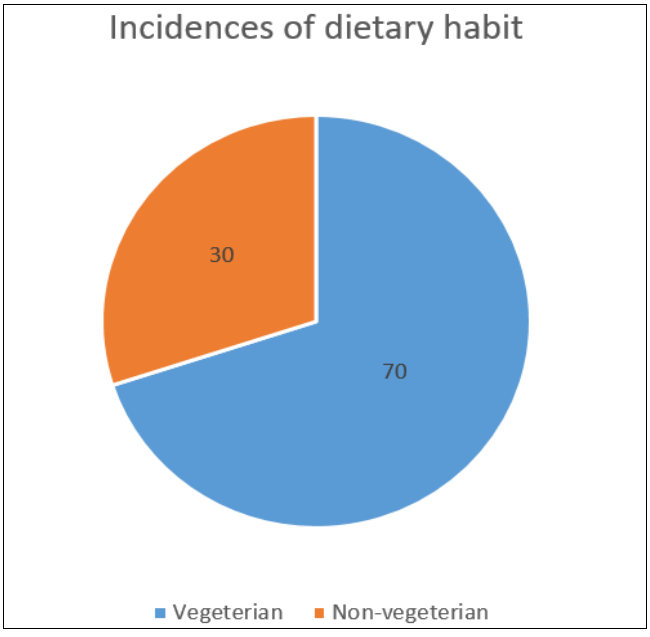
Gender	Number
Male	68
Female	32



C. Incidences of Dietary Habit

Table 4:

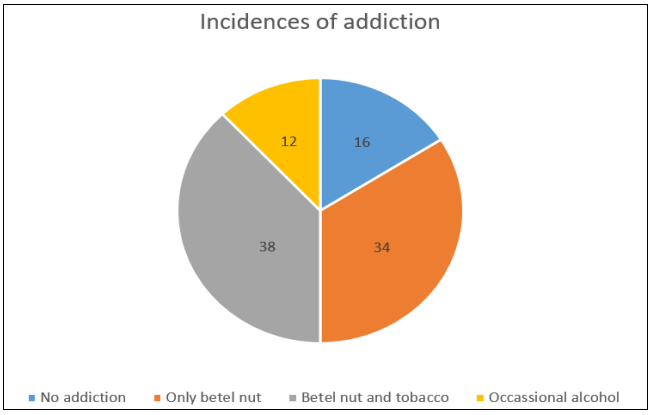
Diet	Number
Vegeterian	70
Non-vegeterian	30



D. Incidences of Addiction

Table 5:

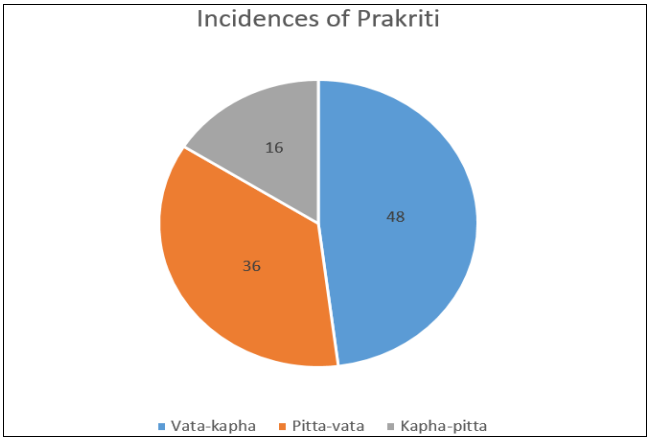
Addiction	Number
No addiction	16
Only betel nut	34
Betel nut and tobacco	38
Occasional alcohol	12



E. Incidences of Prakriti (by Look and Nadi Pariksha)

Table 6:

Prakriti	Number
Vata-kapha	48
Pitta-vata	36
Kapha-pitta	16



F. Result of Therapeutic Trial

Paired t-test is used for analysis of the result.

Table 7: Effect on cholesterol

Serum cholesterol level	mean	SD	SE	t value	P value
Before treatment	247.73	44.80	4.48	12.05	<0.0001
After treatment	190.80	30.42	3.04		

As the P<0.0001, this difference is considered to be extremely statistically significant.

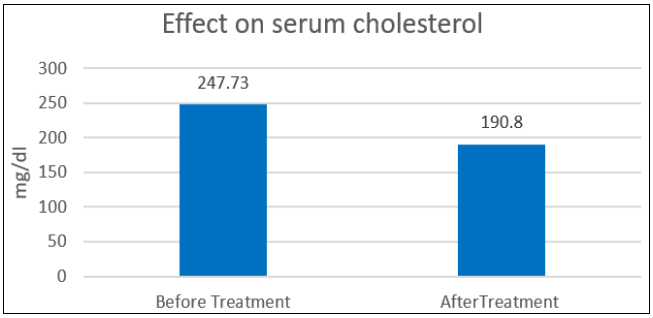


Table 8: Effect on triglyceride

Serum triglyceride level	mean	SD	SE	t value	P value
Before treatment	203.16	90.14	9.01	9.4456	<0.0001
After treatment	159.35	59.10	5.91		

As the P<0.0001, this difference is considered to be extremely statistically significant.

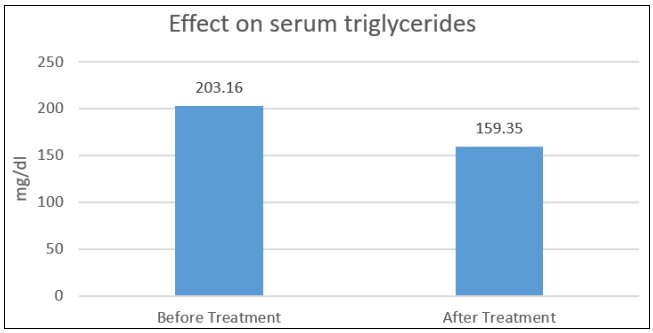


Table 9: Effect on systolic blood pressure

Systolic blood pressure	mean	SD	SE	t value	P value
Before treatment	137.33	13.66	2.49	6.1164	<0.0001
After treatment	127.10	9.13	1.67		

As the P<0.0001, this difference is considered to be extremely statistically significant.

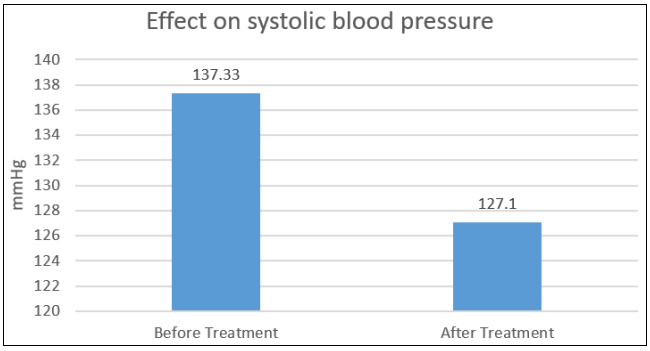
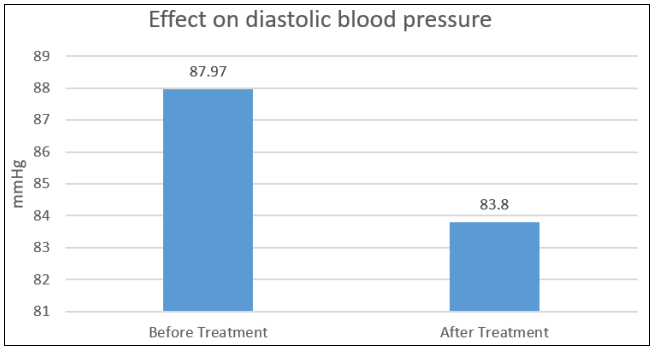


Table 10: Effect on diastolic blood pressure

Diastolic blood pressure	mean	SD	SE	t value	P value
Before treatment	87.97	6.33	1.16	4.4285	=0.0001
After treatment	83.80	5.17	0.94		

As the P=0.0001, this difference is considered to be extremely statistically significant.



Result and Conclusion

The trial drug 'suhridaya' is effective in reducing hyper-lipidemia, especially serum cholesterol and triglycerides, in recommended dose and duration.

As per the feedback given by the patients there were not any serious toxic effect, except mild gastro-intestinal upset in a few patients; which was managed by ayurvedic antacid viz. avipattikar churna.

Also, there was a significant reduction in systolic and diastolic blood pressure.

As hyperlipidemia is an established major risk factor for coronary artery disease or ischemic heart disease in Indian population. And the trial drug reduced hyperlipidemia significantly. Therefore, it can be concluded that the drug 'suhridaya' has potent cardio-protective effect and acts as a cardiac tonic, antioxidant i.e. rasayan in recommended dose and duration. This will pave a path in the future for the scientists working for preventive cardiology.

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