

STUDY ABOUT TRIPHALA AND MEDOHARA VIDANGADI LOUHA IN MANAGEMENT OF HYPERLIPIDEIMIA

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ABSTRACT

The present study was done to evaluate the combined effects of triphala and medohara vidangadi louha in management of hyperlipidaemia. Hyperlipidaemia is a common disorder in developed countries and is a major cause of coronary heart disease. In ayurvedic classics, *medavridhi*, *meda roga*, *sthaulya* are described as a major *santarpanjanya vyadhi*, which may be responsible for *prameha*, *mandaagni* and *hridroga*. *Triphala* has been proved to have antihyperlipidaemic effects, it diminishes the serum cholesterol level. *Medohara vidangadi louha* is a very effective in reducing serum cholesterol level. The present study is an outpatient based clinical trial pre and post- test design. 100 patients of hyperlipidaemia, *triphala* and *medohara vidangadi louha* were given for 60 days and reviewed at the interval of 20 days during the treatment. Patient with BMI more than 25kg/m³ and whose lipid profile is more than normal were the inclusion criteria. Patient suffering from other systemic illness like chronic renal failure, carcinoma etc was excluded from study. Total 100 patient are registered, out of which 93 patients completed the study 7 patients discontinued the medicine in-between. The combination of *triphala* and *medohara vidangadi louha* have given statistically highly significant result, thus these drugs can be used effectively in management of hyperlipidaemia.

Keywords: hyperlipidaemia, triphala, *medohara vidangadi louha*.

INTRODUCTION

Hyperlipidemia a broad term, also called as Hyperlipoproteinemia is a common disorder in developed countries and is a major cause of coronary heart disease. It results from abnormality of lipid metabolism or plasma lipid transport or a disorder in synthesis and degradation of plasma lipoprotein. Hyperlipidemia means abnormally high level of fats in the blood. The circulating lipids are of four type's namely free cholesterol, cholesterol ester, triglycerides and phospholipids. Hyperlipidemia

is manifested as hypercholesterolemia and/or hypertriglycerolemia. Hypercholesterolemia is the most common hyperlipidemia. The lipids that are involved in hypercholesterolemia are cholesterol, an essential component of cell membrane and a precursor of steroid hormone synthesis and triglycerides an important energy source. These are carried in lipoproteins which are globular packages that also contain proteins known as apoproteins.

As lipids come under fat and its compound

the subject hyperlipideimia will come under medodhatu and its related vyapar. In ayurvedic classics, *medabridhi*, *meda roga*, *sthaulya* are described as major *santarpanjanniya vyadhi* which may be responsible for *prameha*, *mandagni* and *hridroga*.^[1]

Herbal treatment for hyperlipideimia has been widely appreciated because of having no side effects as compared to modern, economic and easy availability. *Triphala*, a combination of three herbs has been prove to have antihyperlipideimic effect. It has been established that *triphala* diminishes the serum cholesterol level and also lessens the probability of any type of fat accumulation in the arteries, capillaries etc. there by diminishing the hazards of problem related to the heart that is induced owing to arteriosclerosis. Again *Medohara vidangadi louha* is also very effective in reducing the serum cholesterol level. The whole *yog* is for system curing and for detoxification of the body. It maintain the equilibrium of three *dosas* and nourish the all seven *dhatu*s equally. *Vidanga* is antimicrobial and so it kills all the organisms from our intestine.

Sushruta has given the definition of health that one is known to be healthy in whom *dosha*, *agni*, *dhatu* and *mala* are in the state of equilibrium in structure and function along with happy mind which function in the presence of *Atma* and with the help of *indriyas*.^[2] The definition is unique because psyche and soma both have been considered and in soma also the structure and function both are accountable for health.^[3]

Objective of the study: To evaluate the effect of triphala & *medaharavidangadi louha* in the management of hyperlipidemia also to see if there is any side effect of drugs is present.

MATERIALS AND METHOD:

The study is based on 100 patients of hyperlipidemia of both age and sex which were randomly selected for clinical trial from the OPD of our hospital. Suspected patients of hyperlipidemia whose B.M.I is high and lipid profile is more than normal are included for clinical trial.

Inclusion criteria: BMI is more than 25kg/m³, Patients whose lipid profile is more than normal.

Exclusion Criteria: Age: patient below 20yrs and above 70yrs of age, Pregnant lady, Chronic renal failure, Carcinoma, Nephritic syndrome, S.T.D, Hepatitis B positive

Research Design: Single group pre - test – post - test experimental design was applied to the OPD patients of our Ayurveda Hospital. The patients registered for the clinical study were treated with *Triphala Churna & Medohara Vidangadi Louha* 3gm twice daily after food with lukewarm water for duration of 2 months (60days). The ratio of the *triphala and medoharavidangadi louha* is 10:1 (i.e. 100gm of *triphala* and 10gm of *medoharavidangadi louha*).

Assessment Criteria: The assessment of result had been done on the basis of clinical assessment, laboratorial improvement in hyperlipidemia.

Statistical method: The present study is an OPD based clinical trial with pre and post test design. The data collected during clinical study were tabulated and statistically analyzed. The changes observed with ‘p’ value less than 0.001 is considered as highly significant and less than 0.01 is considered significant.

Investigation: The following investigations were carried out: Total Cholesterol (TC), Triglycerides (TG), High Density Lipoprotein (HDL), Low Density Lipoprotein (LDL), TC/HDL.

OBSERVATION:

Status of patients of present study:

In the present study total 100 patients are registered, out of which 93 patients completed the study and 7 patients discontinued the medicine.

Age & Sex: the study reveals that female patients were more affected with hyperlipidemia that is 58 out of 100 patients were female and 42 patients were male, age group between 50 -59 yrs irrespective of sex were mostly affected with 45% followed by 60-69 yr age group with 30%, 16% between 40-49 yrs of age, 5% between 30-39 and 4% between 20-29.

Socio Economic status and diet: in case of socio economic status it is seen that the upper middle class with 54% were affected most followed by lower middle class 27%, high

class 10% and 9% low class and people taking non vegetarian food were mostly influenced with 78%. **Occupation:** housewife with 40%, businessmen with 20%, service person with 9% and others 31% were affected with hyperlipidemia.

Addiction: people consuming tea was mostly affected by hyperlipidemia with 66%, followed by alcohol 15%, coffee 7% and smoking 12%.

Religion: 67% of the patients were hindu while 33% were of Islamic religion. family history: incidence of positive family history present in 65% of cases and rest 35% were having negative impact of family.

RESULT:

Table 1: Showing the statistical assessment of the result

Objective criteria	Duration	mean±SD	Mean difference ±SD	d.f.	s.e.	t value	p value	remark
TC	B.T	223.41±15.5		29	2.65	9.05	<0.001	HS
	F.U.1	214.43±15.31						
	F.U.2	207.24±11.84						
	F.U.3	200.72±12.38						
	A.T		22.6±14.52					
HDL	B.T	42.36±5.92		29	0.92	5.76	<0.001	HS
	F.U.1	44.23±5.32						
	F.U.2	45.66±5.4						
	F.U.3	46.43±5.36						
	A.T		4.07±5.05					
LDL	B.T	121±10.48		29	3.42	2.54	<0.01	HS
	F.U.1	117.05±10.96						
	F.U.2	115.06±9.52						
	F.U.3	112.33±10.35						
	A.T		8.67±18.71					
TG	B.T	149.63±5.96		29	0.89	10.44	<0.001	HS
	F.U.1	146.42±6.12						
	F.U.2	142.7±6.80						
	F.U.3	139.8±6.21						
	A.T		9.38±4.89					
TC/HDL	B.T	5.34±0.917		29	0.149	7.38	<0.001	HS
	F.U.1	4.90±0.79						
	F.U.2	4.55±0.68						
	F.U.3	4.32±0.65						
	A.T		1.02±0.81					

Sd= standard deviation
d.f.=degree of freedom

B.T.=Before Treatment
FU= 1ST Follow up

t value=test of significance
 p value=probability
 H.S.=Highly Significant
 S=Significant

FU= 2nd follow up
 FU= 3rd follow up
 A.T.=After treatment

DISCUSSION

Hyperlipidemia is a common problem in common population due to change of life style and food habits. This people suffer from most vulnerable diseases due to atherosclerosis changes which could be many more fatal or sudden.

The hyperlipidemia are a complex group of diseases that can be designated either primary or secondary, depending on there cause. Primary hyperlipidemia can result from a single inherited gene defect, or more commonly are caused by combination of genetic and environmental factors. Secondary hyperlipideimia are the result of a more generalized metabolic disorder such as diabetes mellitus, excessive alcohol intake, hypothyroidism, or primary biliary cirrhosis. Hyperlipideimia represents a public health epidemic that continues to paralled the increase prevalence obesity and is intimately implicated in the development of coronary heart disease. Reducing the serum cholesterol level reduces the incidence of coronary heart disease.^[4]

Pathophysiology of Medoroga:

Rasa which is the source of nousishment for the entire body, may cause chiefly for obesity and asthenia.^[5] Rasa is the product after metabolism and digestive process of food and this digestion and metabolism is dependent on *Agni*. These are in three different levels

1. *Jatharagni*
2. *Bhutagni and*
3. *Dhatuagni*.

The food first goes in *jatharagni pak* in which big molecules of foods converts in small molecule for absorption, under the heading of *Awasthapak* which includes the Salivary (*Madhurpak*), gastric (*amlapak*)

and intestinal (*katupak*) digestion. The food thus processed by *jatharagni* is further metabolished by *bhutagni* and *dhatuagni* (Chakrapani on Charak Chikitsa tika). *Ama rasa* absorbed by *mahasrotas* goes in circulation and is made available to different tissues for nutrition under three ways called *tribidh Nyayas-*

1. *Kedarikulya Nyay*
2. *Khalekapot Nyay*
3. *Khseeradadhi Nyay*

According to *kedarikulya nyaya* the circulating *amarasa* reaches to different tissues through the respective channels and it is utilized in the transformation or nourishment of the *dahtus*. According to *khalekapot nyaya* the selective tissues of the body collect nourishment to full their requirement direct by *annarasa*. According to the third *nyaya dhatu* of the body are arranged in serial order and they are nourished one by one as the milk converted into curd by processing similarly *rasa* is converted into *rakta* then, *mamsa* then *meda* so on.

Thus the nutrition for different tissues converted by *rasa* is due to *dhatwagni*, that helps in homeostasis after *chaya*, *upachaya* (cata bodism, wear and tear) or to produce *ushna* or *urza* (energy). In the absence of the sufficient nutrition the homeostatis mechanism of the body is distributed and this phenomenon may be general or specific in *medo roga*, the anabolic process supersedes the catabolic process in *meda dhatu*, so there is collection of *meda* and other tissues go on decreasing due to paucity of nutrition available to them.

In *medoroga* the *dhatuagni* is reduced at the level of *rakta* and *mamsa* and entire nutrition is channelised to *meda*. These

hypo and hyper functioning of dhatwagni is governed by jatharagni as charak has clearly mentioned that vriddhi and chhaya of dhatwagni depends upon the state of jatharagni.^[6]

Charak has described also that atyagni digests food rapidly as if consumed; having consumed the food it also begins to consume the dhatus. This condition in view of the modern development in medicine may be considered as hyper metabolism as seen in hyperthyroidism there is increased cellular respiration i.e. oxidation leading to consumption of the tissues. A reverse condition is also on record hypometabolism caused by hypothyroidism associated with increase bulk of body.

DISCUSSION ON DRUG

Triphala is a matchless herbal formulation that has been gift of Ayurveda to this world. It is known for its spasm releasing properties. In case of high blood pressure there is a kind of spasm in the arteries that restricts the blood flow. *Triphala* is helpful in releasing this spasm facilitating easy blood flow. In high cholesterol also it helps in reducing the level. It doesnot let the bad cholesterol i.e. LDL, low density lipo protein to propagate in the body and promotes the production of good cholesterol i.e. HDL in the body. In atherosclerosis also it helps in circulating the blood flow freely.

It is a herbomettallic medicine. It is a classical medicine referenced from *Bhiasajya Rantavali*. Medohara vidangadi louha is a helpful medicine in losing weight and curing diseases related to obesity.^[7] It has an anti obesity action. It is a louha kalpa. *Louha kalpa* are preparation of louha *bhasma* as main ingredient added to other drugs. For preparing louha kalpa the medicinal herbs are reduced to fine powder and mixed with louha *bhasma*. *Bhavana* is given with prescribed liquids if mentioned. When well protected from moisture, heat;

louha kalpa keeps its potency for a period of 2 yrs. Ingredients of vidangadi louha are *Vidanga, Musta, Haritaki, Bibhitaka, Amalaki, Pippali, Sunthi, Bel giri, Shvet chandana, Sugandhabala, Patha, Khas, Balamula, Ayaschurna*.

It is seen that all the plants of medohara vidangadi louha and triphala have the quality of ruksha and laghu and katu as vipaka. If we see in hyperlipidemia meda and kapha are the main pathological factors responsible and both are jala and prithvi mahabhuta predominant and the drugs I have used in this study contain the quality opposite of kapha and meda that is ruksha and laghu. Hence if we see the mode of action of working of these drugs in hyperlipidemia we can say that depending on rasa, guna, virya and vipaka the medicine works. And hence we can say that medoharavidangadi louha and triphala both work in hyperlipidemia.

On observation of the study:

From the above statistical analysis it was found that the mean value \pm SD of total cholesterol was 223.41 ± 15.55 mg/dl at before treatment. After 60days of treatment it is reduced to 200.72 ± 12.38 . The rest of the significance shows the effect of medoharavidangadi louha and triphala churna is highly significant with P. value less than 0.001.

Similarly in case of serum HDL the mean value \pm SD before treatment was 42.36 ± 5.92 which increased to 46.43 ± 5.36 after 60 days of treatment. The test of significance shows that the effect of medoharavidangadi louha and triphala is highly significant with p value less than 0.001.

The mean \pm SD of serum LDL before treatment was 121 ± 10.48 which decrease to 112.33 ± 10.35 after treatment the test of significance shows that the effect of the drug is significant with p value less than 0.01.

In case of triglycerides mean \pm SD before treatment was 149.63 ± 5.96 mg/dl which is decreased to 139.8 ± 6.21 mg/dl after 60 days of treatment. The test of significance shows that the effect of the drug is highly significant with p value < 0.001

In case of TC/HDL ratio mean \pm SD before treatment was 5.34 ± 0.917 . after 60 days of treatment it decreased to 4.32 ± 0.65 . the test of significance shows that the effect of drugs is highly significant with p value less than 0.001

Table 2: Improvement in total cholesterol

Sl no.	Laboratorial assessment	After 60 days of treatment	
1.	Total Cholesterol	Maximum improvement	16(16%)
		Moderate improvement	31(31%)
		Mild improvement	21(21%)
		No response	32(32%)

Table 3: Improvement in HDL

Sl no.	Laboratorial assessment	After 60 days of treatment	
2.	HDL	Maximum improvement	14(14%)
		Moderate improvement	39(39%)
		Mild improvement	18(18%)
		No response	29(29%)

Table 4: Improvement in LDL

Sl no.	Laboratorial assessment	After 60 days of treatment	
3.	LDL	Maximum improvement	20(20%)
		Moderate improvement	42(42%)
		Mild improvement	20(20%)
		No response	18(18%)

Table 5: Improvement in TG

Sl no.	Laboratorial assessment	After 60 days of treatment	
4.	TG	Maximum improvement	11(11%)
		Moderate improvement	30(30%)
		Mild improvement	43(43%)
		No response	16(16%)

Table 6: Improvement in TC/HDL

Sl no.	Laboratorial assessment	After 60 days of treatment	
5.	TC/HDL	Maximum improvement	16(16%)
		Moderate improvement	35(35%)
		Mild improvement	19(19%)
		No response	30(30%)

CONCLUSION

The overall effect of therapies showed that moderate improvement was maximum found among the patients. There is no any adverse reaction found with the drugs. Administration of drug in longer duration is needed for better results. The combination of *triphala choorna* and *medoharavidangadi louha* has given statistically highly significant results. Thus it can be concluded that these medicines are effective in management of hyperlipidemia.

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