

Clinical study to evaluate the role of *Virechana Karma* in management of Dyslipidemia

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Abstract

Dyslipidemia is one of the life style disorder due to the today's faulty life style including food habits, minimum physical exercise, stress, anxiety and depression. Every 1% increase in cholesterol level is responsible for 1-2% increase in the incidence of Coronary Heart Disease. Lipids can be correlated to that of *Medo Dhatu*. According to the different references Dyslipidemia can be correlated to *Medo Dosha* and subsequently as *Medoroga*. The treatment principles mainly includes *Samshodhana Chikitsa* (Bio cleansing), where as statins are first choice of drug in modern science. Looking into the adverse reactions and the limitations in the modern medication clinical trial was carried out in 30 patients having Dyslipidaemia. Classical *Virechana Karma* was performed and the effect of treatment on the complete lipid profile was assessed after the treatment. Statistical analysis showed highly significant result in the lipid profile.

Key words: Dyslipidemia, Lipid profile, *Virechana Karma*

Introduction

The changes in the today's life style mainly includes faulty food habits, minimum physical exercise, maximum mental and intellectual exercise with stress, anxiety and depression resulting into various abnormalities in body composition. Dyslipidemia is one such potential signal for unrecognized co-morbidities like Obesity, Metabolic syndrome, Diabetes mellitus, Hypertension, Cardio-vascular disease etc. It may be manifested by elevation of the total cholesterol, low density lipoprotein (LDL) cholesterol and the triglyceride concentrations and a decrease in high density lipoprotein (HDL) cholesterol concentration in the blood [1]. The prevalence of Dyslipidemia in India is not exactly known as it usually appears as subclinical case without symptoms. For every 1% increase in cholesterol level causes 1-2% increase in the incidence of Coronary Heart Disease [2]. There are scattered references available in Ayurveda correlating Dyslipidemia. Lipid is often correlated to that of *Medo Dhatu*. Abnormal composition of *Medo Dhatu* is considered as *Medo Dosha* and subsequently as *Medoroga*. Statins are the first choice in the treatment of Dyslipidemia, however the need for long term, lifelong therapy with Statins is associated with several adverse effects like myopathy, increased risk in acute and chronic renal failure, hypothyroidism and memory loss[3]. *Medo Roga* being *Bahu Dosha* (excessive vitiated) dominant condition *Samshodhana Chikitsa* (Bio cleansing) is preferred treatment modality

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among those *Virechana Karma* (Purgation) is best for the elimination of excessively vitiated *Pitta Dosha* and to correct *Agni* which is the basic factor involved in the pathogenesis of *Medoroga* [4]. Thus with this understanding clinical study was done to evaluate the efficacy of *Virechana Karma* in Dyslipidemia.

Materials and Methodology:

Diagnostic criteria:

Abnormal levels of serum lipid profile and the clinical features of *Medoroga* like *Sarvakarmasu Ashaktata, Dourbalya, Svedadhikya*.

Inclusion criteria: Serum Cholesterol (201mg/dl or more), Serum Triglycerides (161mg/dl or more), Serum HDL (below 40mg/dl), Serum LDL (131mg/dl or more), Serum VLDL (41mg/dl or more), All or any of these.

Exclusion criteria:

Patient's age below 20 years & above 60 years, patients not fit for *Virechana*, with any other systemic diseases like cardiovascular diseases, any rectal pathology like hemorrhoids, fissure etc., were excluded from study.

Laboratory investigation: Routine hematological and urine investigations, lipid profile, liver function test were carried out before and after the treatment.

Assessment criteria:

Complete Lipid profile including serum cholesterol, serum triglycerides, serum HDL, serum LDL, serum VLDL were assessed before and after completion of treatment.

Methodology

30 patients fulfilling the criteria were selected randomly and were treated with classical *Virechana Karma*.

Poorvakarma:

Panchakola Choorna [5] was administered thrice a day in the dose of 2gms orally after food along with *Sukoshnajala* for a period of 3 to 7 days until *Nirama Lakshana* was obtained.

Triphala Taila [6] was administered between 6:30 to 7 am with *Ushna Jala* as *Anupana* in an increasing dose started with small i.e., 30 to 50 ml on the first day, depending upon *Agnideepti* (increased power of digestion) second day onwards the dose was increased accordingly for a period of 3-7 days till

Samyak Snighda Lakshana (proper features of internal oleation) were observed.

Sarvanga Abhyanga (whole body massage) with *Dashamoola Taila* for 25 minutes followed by *Mridu Bashpa Svedana* (mild sudation) for 10 minutes was carried out for 4 days including the day of *Virechana Karma*.

Diet during three days gap: Diet including rice gruel, green gram soup, sour fruits like grapes, sweet lemon, orange and pomegranate was advised.

Pradhana karma:

Virechana Yoga (formulation for purgation):

40 gms of *Triphala Kvatha Choorna* (powder of *Terminalia chebula*, *Terminalia bellerica* and *Embelica officinalis*), boiled in 160ml of water reduced to 80 ml, to which 15 grams of *Trivrit Choorna* (powder of *Operculina turpenthum*) and 10 grams of *Katuki Choorna* (powder of *Picchrohiza kurroa*) was mixed, followed by 1 to 2 tabs of *Ichhabhedi Rasa* was administered as *Virechana yoga*.

Administration of Virechana Yoga

After *Sarvanga Abhyanga* and *Mridu Svedana* patients were examined for the vitals like pulse, blood pressure then above mentioned *Virechana Yoga* was administered in between 9.30 to 10.00 am with warm water later on as per the need 1 to 2 *Ichhabhedi Rasa* tablet (125mg each) were given.

Advise: Patients were instructed to take warm water repeatedly, not to sleep in the afternoon, not to sit under fan or near the window, not to roam outside in the breeze or sunlight, have a rest on the bed and to attend the urge of defecation.

Observations of the patient

The observations like the time of initiation of *Virechana Vega* (urge of defecation), total number of *Virechana Vega*, time of completion, nature of *Vega*, *Kshudhapravritti*, examination of vitals, *Lainghiki Lakshana*, *Antiki Lakshana*, *Vyapad* if any were noted.

Samsarjana Krama

The special diet consists of liquid rice gruel, thick rice gruel, green gram soup, green gram soup with spices, fat and meat soup (only in non vegetarian patients) were administered each for 1, 2, 3 *Annakaala* wherein a day consists of 2 *Annakaala*. In this way these four diets were advised for 3, 5 and 7 days

depending upon *Avara*, *Madhyama* and *Pravara Shuddhi* respectively[7].

Code and conduct: Excessive speech ,travelling, exercise, sitting and lying in improper posture, exposure to wind, cold, heat and dust and in general advised to take luke warm water, to avoid heavy ,oily food stuffs and suppression of natural urges.

Observations and Result

Out of 30 patients maximum 63.33% patients were male, 83.33% patients in between the age group 25-50 yrs. 53.33% patients were hindu,76.66% patients were married, 80% patients were having the history of strenuous work, 53.33%were *Vata Kapha Prakriti*, 53% were *Kroora Kosta*,78% patients were non vegetarians.

Table No.1			
Effect of treatment in the complete Lipid profile Before and After the treatment			
Lipid Profile	BT	AT	Significance
Serum Cholesterol	240.84±32.73	199.87±27.21	<0.001**
Serum Triglycerides	256.89±82.27	152.78±15.05	<0.001**
Serum HDL	51.71±7.43	56.87±6.50	<0.001**
Serum LDL	131.07±33.27	113.28±29.90	0.018*
Serum VLDL	51.39±16.53	30.46±3.07	<0.001**
** Highly Significant * Significant			

The mean cholesterol was 240.84 mg/dl before treatment which reduced to 199.87mg/dl(17.02%) after treatment with p<0.001 which is highly significant, The mean triglycerides level was 256.89mg/dl before treatment which reduced to 152.78mg/dl(40.53%) after treatment with p<0.001 which is strongly significant,mean HDL was 51.71 before treatment which was increased to 56.87mg/dl(9.97%) after treatment with p<0.001 which is strongly significant.The mean LDL was 131.07 before treatment which reduced to 113.28(13.58%) after treatment with p<0.018 which is moderately significant.The mean VLDL was 51.39 before treatment which reduced to 30.46(40.73%) after treatment with p<0.001 which is strongly significant.

Discussion

Dyslipidemia can be studied under the broad umbrella of *Sthaulya* in *Brihatrayi*. *Atisthaulya* is at first mentioned by Acharya Charaka as one of the *Kaphaja Nanatmaja Vikara* in *Maharoga Adhyaya* and is later on elaborated upon in the subsequent *Ashtau Ninditiya Adhyaya*[8]. On further contemplation it is evident that *Atisthaulya* is physiology predominant disorder which eventually gets converted into a pathological state. A review of the *Laghutrayi* bears certain references to Dyslipidemia. Adhamalla while commenting on Sharangdhara Samhita has tried to

differentiate between the two types *Medo Roga* viz; *Sthaulya* and *Medo Dosha* [9]. According to the distinction made by him, the former is characterized by *Udaravridhhi* whereas the latter is characterized by morbid changes occurring due to obstruction of the channels.

Virechana Karma has showed better result in reducing the cholesterol level which can be explained in two ways viz., action through Liver and Intestine *Virechana Karma* being the best treatment for *Pitta Dosha* through which large amount of bile is excreted which indirectly helps in the excretion of cholesterol. Apart from this the site of action of *Virechana Karma* is on *Adho Amashaya*(small intestine) from where the cholesterol is reabsorbed. This *Virechana Karma* may be helping to convert the cholesterol in the non absorbable form so that it may not be reabsorbed.

On the other side *Yakrit* (liver) being the main organ of *Pitta Sthana*, *Virechana Karma* may be having direct effect on the functioning of liver as it is indicated in many of the hepato biliary diseases like hepato cellular Jaundice etc., once the functioning of liver is corrected the synthesis of cholesterol may be checked and excretion of cholesterol may be increased by stimulating the bile production and secretion.

As in *Virechana Karma* deleterious substances are brought from the peripheral tissues to the intestine by adopting proper *Snehana, Svedana*. This means the cholesterol present at the plasma and tissue level might have come to the intestine for the excretion by therapeutic purgation. Considerable effect in the triglycerides by *Virechana Karma* could be attributed to the following reasons. The main action of *Virechana Karma* is on *Pitta Dosha*, indirectly on *Agni* which plays an important role in the digestion and metabolism through which the synthesis of triglycerides might have regulated. The main action of *Virechana Karma* is on *Koshtha* (small intestine) from where the raw materials for the synthesis of TGL will be absorbed. Hence regulating the functions of intestine may regulate the uptake and absorption of raw materials for TGL. The liver plays a major role in the synthesis and storage of TGL. *Virechana Karma* is the major treatment for *Pitta Dosha* and *Pitta Sthana*, liver being one of the major *Pitta Sthana* *Virechana Karma* significantly improve the function of liver which indirectly regulates the synthesis of TGL. The improvement in the HDL level, probable reason could be as *Virechana Karma* mainly works on *Agni, Pitta Sthana*(liver)and *Koshtha* i.e intestine which helped for the proper formation of *Dhatu* i.e., tissues in general and quality tissues in particular. Further in LDL and VLDL level also much better result was observed. As *Virechana* improves *Agni* there by regulates the uptake of raw material for the production of lipids. It also improves the functioning of liver there by regulates the endogenous production of VLDL.

Conclusion

Dyslipidemia can be correlated with abnormal *MedoDhatu (Medo Dosha)*. Considering *Medo Roga as Bahudoshaavastha, Srotorodha* dominant condition, *Samshodhana* is the preferred *Chikitsa*, among *Samshodhana Virechana Karma* is best to correct *Agni*. *Virechana Karma* was highly effective in reducing the lipid profile level, particularly in triglycerides level and HDL level was increased which was statistically highly significant.

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