

**A RANDOMIZED, STANDARD CONTROLLED, COMPARATIVE CLINICAL TRIAL ON VIRECHANA KARMA ALONE AND VIRECHANA KARMA FOLLOWED BY GOMUTRA SHILAJIT IN THE MANAGEMENT OF DYSLIPIDAEMIA (MEDOROG)**

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**ABSTRACT**

Now a days Dyslipidaemia is very common in the society. It is a major risk factor of coronary heart disease, CHD is the main single cause of death in the world. There are number of currently available hypolipidemic agents in the contemporary medicine have a number of side effects. The Ayurveda *Samshodhana Chikitsa* as a treatment protocol can provide better effect. Therefore, the present study was designed to evaluate the effect of *Virechana Karma alone* and *Virechana karma* with *Gomutra Shilajit* in the management of dyslipidaemia. The main objective of the study is to evaluate the effect of *Virechana Karma* and *Gomutra Shilajit* in the management of dyslipidaemia (*Medoroga*). In this research all the patients showed highly significant result in the management of *Medoroga*. In this context we found *Virechana karma* separately effective in the management of dyslipidaemia and also along with the *Gomutra shilajit* is also very effective in the management of dyslipidaemia.

**KEYWORDS:** *Medoroga*, dyslipidaemia, *Gomutra Shilajit*, lipid profile *Virechana Karma*

**INTRODUCTION**

The current century is an generation of fantastic improvement and innovation in all elements of existence in time-honored and in the discipline of science in particular, which has made dwelling a lot greater satisfied on one facet however on the different side, talented many life-style associated diseases. One of such present is dyslipidaemia which is a practicable sign for unrecognized comorbidities such as obesity, metabolic syndrome, diabetes mellitus, hypertension, cardiovascular sickness etc.<sup>1</sup> It can also be manifested with the aid of elevation of the whole cholesterol, low-density lipoprotein cholesterol (LDL) and triglyceride (TGL)

concentrations and a reduce in the top high-density lipoprotein (HDL) cholesterol awareness in the blood. The occurrence of dyslipidaemia in India is now not precisely regarded as it typically seems as subclinical case except symptoms. For each and every 1% extends in LDL cholesterol level, there is 1–2% expands in the incidence of coronary CHD (coronary heart disease). Current time there would be more than fifty millions sufferers with Coronary artery disorder in India in this figure youth are more sufferers than old one.<sup>2</sup> Statins are the first preference in the therapy of dyslipidaemia.<sup>3</sup> People have been taking a

lipid-lowering medication. Lifestyle adjustments have to usually be a phase of the management of dyslipidaemia. However, the want for long-term, lifelong remedy is related with quite a few damaging results such as myopathy, elevated danger of renal failure, and hypothyroidism and reminiscence loss in 15%-20% of the sufferers on therapy with statins. There are scattered references on hand in Ayurveda which can be correlated to dyslipidaemia. Lipids can be effortlessly correlated to that of *Medo Dhatu*. Abnormal composition of *Medo Dhatu* is regarded as *Medo Dosha* and because of this as *Medoroga*. *Medoroga* being *Bahu Dosha* (excessive vitiated) condition, *Samshodhana Chikitsa* (bio-purification) is desired as cure modality. Among these treatments, *Virechana Karma* (therapeutic purgation) is exceptional for the removal of excessively vitiated *Pitta Dosha*, to right *Agni* (factor accountable for digestion and absorption) and followed by *Gomutra Shilajit* is *Sansaman Chikitsa* is the first-rate cure for correction of *Tridosha*, which are the fundamental elements concerned in the pathogenesis of *Medoroga*.<sup>4</sup>

Considering the incidence, occurrence and have an effect on of dyslipidaemia on comorbid pathology and barriers in its treatment, there is a want to supply protected and wonderful therapeutic measures. Thus, with this thought, a widespread managed comparative medical learn about was once carried out to consider the efficacy of *Virechana Karma* and *Virechana* followed by *Gomutra Shilajit*.

## AIMS AND OBJETIVES

1. To evaluate the Efficacy of *Virechana Karma* alone in the management of dyslipidaemia (Medoroga).
2. To evaluate the Efficacy of *Virechana Karma* with *Gomutra Shilajit* in the management of dyslipidaemia (Medoroga).
3. To compare the Efficacy of *Virechana Karma* and *Virechana* followed by *Gomutra Shilajit* in the management of dyslipidaemia (Medoroga).

## MATERIAL AND METHOD

The present study was a randomized, standard controlled, comparative clinical trial over a period of 3 months with an above cited objective. The protocol of study was approved by the Ethical Committee of the Rajiv Gandhi Education Society Ayurvedic Medical College Hospital and PG Research Centre, Ron. After obtaining informed consent form (ICF) sixty patients of either gender (male & female) in the age group of 30–55 years fulfilling the following study criteria were included in the study.

### Inclusion Criteria

Abnormal serum lipid levels like serum cholesterol (220 mg/dl or more), serum TGLs (190 mg/dl or more), serum HDL (below 35 mg/dl), serum LDL (10 mg/dl or more), and serum VLDL (35 mg/dl or more) age between 30 to 55 and irrespective to both sexes (male & female) were included in the study.

A certain scientific history, scientific examination, anthropometric measurements, and baseline laboratory investigations such as Hb %, TLC, DLC, ESR, Urine evaluation had been additionally carried out in addition to serum lipid profile.

### Exclusion Criteria

Patients with a history of systemic disorders like cardiac, hepatic, renal, and neurological diseases and who were not fit for Panchakarma (*Virechana Karma*) were excluded.

## Grouping

Sixty patients were divided into two groups (thirty patients each) by random sampling method. *Virechana Karma* was administered to patients in group A and *Virechana karma Followed by Gomutra Shilajit* in group B respectively. The effect of treatment was assessed by analyzing the complete lipid profile after completion of treatment and follow-up in comparison to baseline status

### Group A

For Agni *Deepana Panchakola Churna*<sup>5</sup> was once administered to affected person thrice a day in the dose of three grams orally after food along with *Shukhoshna Jala* (lukewarm water) for a duration of 3–6 days till features of appropriate appetite was obtained. There after *Gau Ghrita* used to be administered *Pratah Kaala* (between 6:00 am and 7 am) with lukewarm water as *Anupaana* (adjuvant) in a growing dose, beginning with 30 ml on the first day, relying upon *Agnideepti* (increased strength of digestion). Second day onwards the dose used to be extended as a consequence for a length of 3-7 days until *Samyak Snigdha Lakshanas* (proper elements of inside oleation) were observed. Last dose of *Gau Ghrita* was 300ml. *Sarvanga Abhyanga* (whole physique massage) with *Mahanarayana Taila* for 25 minutes observed by using *Mridu Vashpa Swedana* (mild sudation) for 15 minutes was once carried out for four days consisting of the day of *Virechana Karma*. During these three-day, a mild weight loss program along with rice gruel, gram soup, grapes, candy lemon, orange and pomegranate used to be advised.

### Preparation of Virechana Yoga (formulation for purgation)

Thirty grams of *Triphala Kwatha Churna* (powder of *Terminalia chebula*, *Terminalia bellerica* and *Emblica officinalis*) was once boiled in four part (one hundred twenty ml of water) and was once decreased to half amount (60 ml) to which 20 g of *Trivrittha Churna* (powder of *Operculina turpethum*) and 12 g of *Katuki Churna* (powder of *Picchrozea kurroa*) was once mixed. The above combination used to be administered accompanied by way of 1-2 tablet of Myrolax forte as *Virechana Yoga*.

### Administration of Virechana Yoga :

After *Sarvanga Abhyanga* and *Mridu Svedana*, sufferers have been examined for the vitals such as pulse, blood stress etc., and then, the above stated *Virechana Yoga* used to be administered in *Pitta Kaala* (between 9.30 am and 10 am) with hot water. Later as per the need, 1–2 Myrolax forte tablet (125 mg each) had been given. Patients had been suggested to take hot water repeatedly, no longer to sleep in the afternoon, now not to sit down beneath fan or expose to robust winds or sunlight, have a relaxation and to attend the urge of defecation.

### Observations of the patient:

The observations like the time of initiation of *Virechana Vega* (urge of defecation), whole quantity of *Virechana Vega* (bouts of purgation), time of completion, nature of *Vega*, *Kshudha Pravritti* (hunger), examination of vitals, *Laingiki Lakshana* (features of the applicable *Virechana*), *Antiki Lakshana* (features of perfect completion of the procedure), or *Vyapad* (complications) if any had been noted. After the completion of *Virechana*, all the sufferers have been cautioned for one-of-a-kind food regimen which consists of liquid rice gruel, thick rice gruel, inexperienced gram soup, inexperienced gram soup with spices and meat soup (only in nonvegetarian patients) administered every for 1, two or 3 *Annakala* (meals) where in a day consists of

2 Annakala. In this way, these 4 diets had been counselled for 3, 5 and 7 days relying upon Avara (average), Madhyama (medium) and Pravara Shuddhi (best purification) respectively.<sup>6</sup> Thereafter, comply with up of the sufferers was once accomplished as soon as in fortnight up to ninety days.

### Group B

In this group, Sansaman Chikitsa was administered to the patients of Medoroda (Dyslipidaemia) as per Shastra schedule. In this sequence after the Virechana Karma I used Gomutra Arka with Shilajit 20 ml BD.

### Preparation of Gomutra Arka Shilajit

1000 ml of Gomutra Arka was procured from the pharmacy and added 40 gms of Shilajit (Suryatapi) mixed till a homogeneous mixture was obtained. After the preparation of Gomutra Arka Shilajit 20 ml BD administered to the patient of Group B. Follow-up of the patients was done once in fortnight up to 90 days.

### Assessment Criteria

Complete lipid profile including serum cholesterol, serum triglycerides, serum HDL, serum LDL and serum VLDL were assessed before starting the treatment, after completion of treatment and after follow-up and were analyzed in terms of percentage relief and statistical evaluations.

### Statistical Analysis

The statistical analysis was done using students paired “t” test. ANOVA was applied for the analyzing the parameters of lipid profile. SAS 9.2, SPSS 15.0, Stata 10.1, MedCalc 9.0.1, Systat 12.0 and Rnvironment version 2.11.1 manufactured by IBM Corporation

### Observation and Results

The consequences have been expressed in percentages and suggest  $\pm$  general deviation. ANOVA used to be used to discover the

magnitude of cure on the lipid profile. By inspecting the data, it used to be discovered that, out of sixty patients, 63.33% sufferers have been male, 83.33% sufferers had been from the age team of 25-50 years, 53.33% sufferers had been Hindus, 76.66% sufferers have been married and 36.66% belongs to greater center class. It used to be additionally discovered that 65.55% sufferers have been taking vegetarian diet, 56.66% sufferers had the addiction of Vishamashana, 68.88% of sufferers have been often doing consumption of curd in excess, 77.77% have been the use of mustard oil in the diet, 60% of the sufferers had Vishamagni, 53.33% had been of Vata-Kapha Prakriti (body constitution), 53% sufferers have been of Krura Koshtha (bowel habits) and 66.66% had been taking Madhura Rasa Pradhana Ahara. 67.77% sufferers gave the history of day sleep, 68.88% of sufferers had a records of fear and 55.55% sufferers had sedentary lifestyle. In the study, out of fifty seven females, forty two (73.69%) had attained menopause, and solely 6.66% of patients had household records of Dyslipidaemia. 41.11% of sufferers had been having physique weight between fifty one and 60 kg. The find out about printed that 67.77% sufferers have been having the serum ldl cholesterol degree above 240 mg/dl, 87.77% sufferers had serum triglyceride degree ranging between 200 and 499 mg/dl, 87.77% sufferers had been having the serum HDL stage in the vary of forty and 60 mg/dl, 32.22% of sufferers have been having the serum LDL stage above one hundred ninety mg/dl, and 78.88% sufferers have been having the serum VLDL degree in the vary of forty one and 60 mg/dl. The Assessment of the result has shown in Tables.

**Table : Showing effect of Therapy on serum cholesterol ( mg/dl ) (Paired‘t’ Test)**

| Variable | Group | Mean |    | MeanDiff. | % Relief | SD $\pm$ | SE $\pm$ | T | P | S |
|----------|-------|------|----|-----------|----------|----------|----------|---|---|---|
|          |       | BT   | AT |           |          |          |          |   |   |   |
|          |       |      |    |           |          |          |          |   |   |   |

|                       |       |       |       |       |        |      |      |      |         |           |
|-----------------------|-------|-------|-------|-------|--------|------|------|------|---------|-----------|
| <b>Sr.TC (mg/dl)</b>  | Gr. A | 224.1 | 219.7 | 4.4   | 1.9%   | 9.56 | 1.74 | 2.51 | <0.05   | <b>S</b>  |
|                       | Gr. B | 229.2 | 202.7 | 26.52 | 11.56% | 13.5 | 2.47 | 10.6 | <0.0001 | <b>HS</b> |
| <b>Sr.TG (mg/dl)</b>  | Gr. A | 195.3 | 190.9 | 4.4   | 2.25%  | 88.9 | 1.63 | 2.69 | <0.05   | <b>S</b>  |
|                       | Gr. B | 212.6 | 191.7 | 20.86 | 9.81%  | 11.7 | 2.14 | 9.70 | <0.0001 | <b>HS</b> |
| <b>Sr.LDL (mg/dl)</b> | Gr. A | 115.2 | 114.5 | 0.766 | 0.66%  | 5.82 | 1.06 | 0.72 | >0.05   | <b>NS</b> |
|                       | Gr. B | 113.5 | 104.8 | 8.64  | 7.617% | 7.01 | 1.28 | 6.75 | <0.001  | <b>HS</b> |
| <b>Sr.VLDL (%)</b>    | Gr. A | 45.98 | 45.68 | 0.29  | 0.64%  | 3.27 | 0.59 | 0.49 | >0.05   | <b>NS</b> |
|                       | Gr. B | 47.80 | 45.15 | 2.65  | 5.55%  | 5.07 | 0.92 | 2.86 | <0.01   | <b>HS</b> |
| <b>Sr.HDL (mg/dl)</b> | Gr. A | 65.13 | 65.4  | 0.26  | 0.40%  | 0.98 | 0.17 | 1.49 | >0.05   | <b>NS</b> |
|                       | Gr. B | 66.86 | 67.5  | 0.63  | 0.94%  | 1.84 | 0.33 | 1.87 | >0.05   | <b>NS</b> |

## DISCUSSION

Dyslipidaemia can be viewed underneath the vast umbrella of *Sthaulya* (obesity) noted in the *Brihatrayi*. *Atisthauilya* is first stated with the aid of *Acharya Charaka* as one of the *Kaphaja Nanatmaja Vikara* in *Maharoga Adhyaya* which later has been elaborated upon in the subsequent *Ashtau Ninditiya Adhyaya*.<sup>7</sup> On in addition contemplation, it is evident that *Atisthauilya* is a physiology predominant disease which sooner or later receives transformed into a pathological state. The development from a physiology to pathology is so instantaneous that it can't be pointed out distinctly.

A evaluation of the *Laghutrayi* bears sure references to dyslipidaemia. *Adhamalla*, commentator of *Sharangdhara Samhita* has differentiated between the two kinds of *Medo Roga* particularly *Sthauilya* and *Medo Dosha*.<sup>8</sup>

The higher end result in decreasing the ldl cholesterol stage bought via *Virechana Karma* can be defined in two ways: *Virechana Karma* being the first-class cure for *Pitta Dosha* thru which giant quantity of bile is excreted which in a roundabout way helps in the excretion of cholesterol. Apart from this, the website of motion is on *Adho*

*Amashaya* (small intestine) from the place the ldl cholesterol is reabsorbed. Thus *Virechana Karma* helps to convert the ldl cholesterol in the non-absorbable shape so that it may additionally no longer be reabsorbed. On the different side, *Yakrit* (liver) being the essential organ of *Pitta Sthana*, *Virechana Karma* can also be having a direct impact on the functioning of liver. Once the functioning of liver is corrected, the synthesis of ldl cholesterol might also be checked and excretion of ldl cholesterol can also be improved through stimulating the bile manufacturing and secretion.

In *Virechana Karma*, injurious materials are delivered from the peripheral tissues to the gut by way of adopting appropriate *Snehana* (oleation) and *Svedana* (sudation). This capacity the ldl cholesterol current at the plasma and tissue degree would possibly have been introduced to the gut for the excretion by using therapeutic purgation.

Comparative higher impact on triglycerides (TGL) by way of *Virechana Karma* should be attributed by using the following reasons. The most important motion of *Virechana Karma* is on *Pitta Dosha*, not directly on *Agni* which performs an vital function in the

digestion and metabolism via which the synthesis of triglycerides would possibly have been regulated. It has additionally motion on *Koshtha* (small intestine) from the place the uncooked substances for the synthesis of TGL will be absorbed. Hence, regulating the features of gut may additionally modify the uptake and absorption of uncooked substances for TGL. The liver performs a most important function in the synthesis and storage of TGL. Virechana Karma is the main cure for Pitta Dosha and Pitta Sthana. Liver being one of the predominant Pitta Sthana, Virechana Karma appreciably enhance the characteristic of liver which circuitously regulates the synthesis of TGL.

The enchancement in the HDL stage had passed off as *Virechana Karma* typically works on *Agni*, *Pitta Sthana* (liver) and *Koshtha*, i.e., gut which helped for the perfect formation of *Dhatu*, i.e., tissues in regularly occurring and nice of the tissues in particular. Further, in LDL and VLDL stage additionally a lot higher end result used to be observed. As *Virechana* improves *Agni*, it regulates the consumption of uncooked cloth for the manufacturing of lipids. It additionally improves the functioning of liver there by way of regulates the endogenous manufacturing of VLDL.

In the current study, a modified *Kala Basti* time table used to be adopted, in order to have most *Lekhana Basti* effect, greater quantity of *Niruha Basti* and much less range of *Anuvasana Basti* had been administered as per the *Kala Basti* schedule.

The impact of *Lekhana Basti* on serum ldl cholesterol can be studied beneath two headings

#### 1. Action on Liver

The chief pills of *Lekhana Basti* like honey, *Triphala*, *Gomutra*, *Yavakshara* and *Ooshakadi Gana Dravya* are having *Kaphahara*, *Medohara* exercise which would possibly have been absorbed through

the highest quality haemorrhoidal veins and evacuated at once to the liver, there via correcting liver metabolism. This would possibly have decreased the synthesis of ldl cholesterol by using increasing its excretion. The two-third element at once enters systemic circulation thru inferior and center haemorrhoidal veins ensuing in good sized availability of capsules by using bypassing the metabolism which might also be the reason in discount in serum level.

#### 2. Action on *Tridosha*

The nook stone in the remedy of lowering ldl cholesterol is inhibition of acetyl Co-A reductase which can also be viewed as a phase of *Vata Dosha*. *Basti Karma* regulates the manufacturing and characteristic of *Vata Dosha* also. The impact bought by means of *Lekhana Basti* in serum triglyceride might also be due to the following reasons. The tablets used in *Basti Karma* are frequently *Medohara* (hypolipidemic) and *Lekhana* in nature; subsequently they may have decreased the stage of TGL. Apart from this, the primary causative aspect for dyslipidaemia (*Medoroga*) is the bizarre motion of *Vata Dosha* which in flip will increase the urge for food there by means of ensuing in accelerated calorie intake. Hence to minimize the calorie consumption the essential cure ought to be regulating the motion of *Vata Dosha* which was once carried out with the aid of profitable administration of *Basti*.

The enhancement in the serum HDL stage after the *Basti* was once observed. As *Lekhana Basti* pills are having *Medohara* action, it cleanses the channels of transportation there by way of eliminates the accrued *Dosha* and *Malarupi Medo Dhatu* which may additionally be the cause for the discount of serum LDL and VLDL level.

#### CONCLUSION

Dyslipidaemia is the atypical quantity of lipids in the blood due to impaired lipid metabolism and can be correlated with

unusual *Medo Dhatu (Medo Dosha)*. Primarily there is *Agni Vaishamy* and *Vata Dushti*, for this reason *Virechana* is nice to right *Agni* and *Basti* to right *Vata Dosha*. In addition, it used to be determined that *Virechana Karma* used to be enormously fine in decreasing the triglycerides degree and *Lekhana Basti* used to be quite high-quality in decreasing ldl cholesterol stage in particular.

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