

EFFECT OF GUDUCHIBHADRAMUSTADI KASHAYA IN THE MANAGEMENT OF MEDOROGA WITH SPECIAL REFERENCE TO DYSLIPIDEMIA

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ABSTRACT

Dyslipidemia is the serious lifestyle diseases in today's era of fast and furious life. It has been well described about the consequences of *Medo Vikriti* and its hazards in our classics. The concept of lipid is correlated with the *Dushita Medas*. Considering these facts, These study was taken by seeing the present statistics of the incidence and prevalence of Dyslipidemia. Herbal drug *Guduchibhadramustadi kashaya* was taken in single groups of 30 patients with *Guduchibhadramustadi kashaya 50ml twice a day*. Result and Discussion reveal that administered formulations have shown the good result in relieving both subjective and objective criteria after the course of 1 month.

Keywords: Dyslipidemia & Guduchibhadramustadi kashaya]

INTRODUCTION

The growing challenge of modernization have resulted in human beings readjusting their customary behavior by modifying their dietary and lifestyle preferences, results into the disturbances of the *Agni* hence metabolism, and ultimately leads to clinical entity known as dyslipidemia.

Dyslipidemia is not a single condition but a range of disorders with a variety of genetic and environmental determinants. It can be caused or modified by wide range of disorders, and its presence can affect many different organs or systems. The presence of dyslipidemia is a key factor in the development of atherosclerosis and endothelial dysfunction, It is essential that everyone with dyslipidemia have full clinical assessment as well as appropriate treatment, so that other

important factors and co-morbidities can be identified and assessed.

In *Ayurveda* there is no such term described like Dyslipidemia. Yet, the lipids, which are described in modern medical science, have properties which closely resemble with the properties of "*Sneha Dravya*". *Meda, Vasa, & Majja* can be correlated with the lipids on the basis of their properties. As long as they are with in their normal physiological state they are considered as "*Dhatu*" and "*Upadhatu*" because they constitute our body. *Medo Roga* as described in *Ayurvedic* texts strikingly resembles with the disorder of modern medicine termed as Dyslipidemia. Due to excessive indulgence in *sleshma vardaka Ahara Vihaara Agnimandya* is developed. Due to *Agnimandya*, *Ama Dosha* is formed resulting in

Ama Annarasa. This *Samarasa* circulates in the body and vitiates *doshas*, *dhatu*s, *srotas*-*es*, etc. There is excessive vitiation of *Medo dhatwagni*, and due to *Medodhatwagnimandya* excessive production of *sama medas* occurs. This *sama medas* circulates and accumulates in whole of the body. Thus both *Poshaka* and *Poshya Dhatus* become *Sama* and ultimately *Medo roga* results.

Many properties of *Tikta Rasa* have been mentioned in *Charaka Samhita* while describing the *rasas*, which are very suitable for the management of *Medoroga* (Dyslipidemia). Ayurvedic formulations has been tried in various aspects of this disease, still there is need of evaluation of certain drugs clinically on various scientific parameters which could be potent, safe, cost effective & easily available in the management of Dyslipidemia. Hence, for the present study it was decided to select the *Guduchibhadramustadi kashaya* for the research purpose.

Materials & methods

1. Selection of cases

The study will be conducted on 30 clinically diagnosed and confirmed patients of dyslipidemia from OPD/IPD of *Aarogyashala* NIA, and SSBH, Jaipur.

A. Inclusion criteria

- i. Patients between the age group of 20-60 years of either sex.
- ii. Patients willing to sign the consent form.
- iii. Patients having sign and symptoms of *medoroga*. Patients between the age group of 20-60 years of either sex.
- iv. Diagnosed and confirmed cases of dyslipidemia & *Medoroga* on the ba-

sis of laboratory investigations. i.e. patient having mild and moderate increase in the total cholesterol level up to 300mg/dl.

B. Exclusion criteria

1. Patients with age below 20 yrs. & above 60 yrs.
2. Patients suffering from diseases like nephritic syndrome, hypothyroidism, jaundice, hepatitis, chronic infections & other serious diseases.
3. Patients having dyslipidemia due to drugs e.g. glucocorticoids, diuretics.
4. Patients having severe increase in total cholesterol level i.e, more than 300mg/dl.
5. **c. Criteria's of Assessments** - Both subjective and objective parameters were employed for assessment of the impact of the treatment .Subjective criteria of evaluation included the observations of both patient and physician assessment.

i. Subjective Improvement

All the patients were specially asked for any changes or improvement in their growing feeling of well being either physically or mentally and their clinical manifestations produced by the drug under trial.

ii. Clinical improvement

All symptoms to be taken for the assessment of clinical improvement, the incidence of presenting features were worked out and the severity of symptoms was rated in each case.

Assessment of Subjective parameters

Table No1: Assessment of *Kshudha aadhikya*(Excessive hunger)

| | |
|---|------------------------------------|
| 0 | becomes hungry after about 6hrs |
| 1 | becomes hungry after about 4-5 hrs |
| 2 | becomes hungry after about 3hrs |
| 3 | becomes hungry after about 2-3hrs |
| 4 | becomes hungry after about 2hrs |

Table No2: Assessment of *Pipasa aadhikya*(Excessive thirst)

| | |
|---|---|
| 0 | drinks about 8-10 glass of water daily |
| 1 | drinks about 10-15 glass of water daily |
| 2 | drinks about 15-20 glass of water daily |
| 3 | drinks about 20-25 glass of water daily |
| 4 | Unable to have a sound sleep for his thirst |

Table No3: Assessment of *Kshudra shwasa*(Breathlessness)

| | |
|---|--|
| 0 | No shortness of breath |
| 1 | Mild dyspnoea after physical exersion relieved on rest |
| 2 | Moderate dyspnoea after physical exersion |
| 3 | Dyspnoea even after daily routine |
| 4 | Breathless even at rest |

Table No4: Assessment of *Swedaadhikya* (Excessive sweating)

| | |
|---|--|
| 0 | normal perspiration |
| 1 | mild perspiration after doing exertion |
| 2 | increased perspiration after doing little exertion |
| 3 | profuse perspiration after doing little exertion |
| 4 | perspiration without exertion |

Table No5: Assessment of *Atinidra* (Excessive sleep)

| | |
|---|---------------------|
| 0 | 6-8 hrs/day sleep |
| 1 | 8-10hrs/day sleep |
| 2 | 10-12 hrs/day sleep |
| 3 | 12-14 hrs/day sleep |
| 4 | >14 hrs/day sleep |

Table No6: Assessment of *Daurbalya* (General debility)

| | |
|---|---|
| 0 | Feeling of well being |
| 1 | Tired after doing strenuous physical activity |
| 2 | Tired after doing moderate physical activity but can perform daily activity |
| 3 | Perform daily activity with difficulty |

| | |
|---|---|
| 4 | Extremely tired to carry out daily routine activity |
|---|---|

Table No7: Assessment of Gaurava (Heaviness of the body)

| | |
|---|---|
| 0 | No feeling of heaviness. |
| 1 | Occasional feeling of heaviness. |
| 2 | Continuous feeling of heaviness, but patient does usual work. |
| 3 | Continuous feeling of heaviness which hampers usual work. |
| 4 | Unable to do any work due to heaviness. |

Table No8: Assessments of Alasya (Lethargies)

| | |
|---|--|
| 0 | Normally active. |
| 1 | Hesitate to start work but once started complete it. |
| 2 | Start work but doesnot complete it. |
| 3 | Doesn't have desire, works under compulsion. |
| 4 | Doesn't start work . |

Table No9: Assessments of Angasada (Sluggishness of the body)

| | |
|---|--|
| 0 | Absent |
| 1 | Occasional Angasada |
| 2 | Continous Angasada but not interfere any activity |
| 3 | Continous Angasada and sometimes interfere daily activity |
| 4 | Continous Angasada which hamper daily activity and confined patient to complete rest . |

Table No 10: Assessment of Krichchavyavayata (loss of libido)

| | |
|---|-------------------------|
| 0 | Absent |
| 1 | Mild loss of libido |
| 2 | Moderate loss of libido |
| 3 | Severe loss of libido |
| 4 | Complete loss of libido |

Table No11: Assesment of Krathana (Snoring)

| | |
|---|---|
| 0 | No snoring |
| 1 | Occasional snoring |
| 2 | Snoring in some parts of sleep |
| 3 | Snoring all the time of sleep |
| 4 | Interrupted sleep due to snoring and snoring accompanied by apnea |

Table No 12: Assessments of palpitation

| | |
|---|---|
| 0 | No palpitation |
| 1 | Mild palpitation after physical / mental exertion |
| 2 | Palpitation after physical exertion |
| 3 | Palpitation even at rest |

4 Palpitation present every time

Assessment of Body Mass Index (BMI-Kg/m²)

Table.No.13.The Grading of the obesity was done on the basis of BMI which is recommended by WHO guidelines (1995)

| Grade | BMI Range | Category |
|-------|-----------|------------|
| 0 | 20-24.9 | Not obese |
| 1 | 25-29.9 | Over wight |
| 2 | 30-39.9 | Obesity |
| 3 | >40 | Very Obese |

iii. In order to assess biochemical changes attributable to the treatment given, following investigations were carried out before and after the clinical trial

- (i) Sr.Total cholesterol , (ii) Sr.Triglyserides, (iii) Sr.HDL (iv)Sr. VLDL (v)Sr. LDL

SELECTION OF DRUGS: In pathogenesis of Medoroga, Agni and Meda Dhatu are two Trial drugs

1. Guduchibhadra mustadi kashaya :- (Ch.Su.21/22) **TABLE.NO.14: CONTENTS OF TRIAL DRUG**

| Name of drug | Latin name | Proportion | Part Used |
|------------------|------------------------------|------------|-----------|
| <i>Guduchi</i> | <i>Tinosphora cordifolia</i> | 1part | Stem |
| <i>Mustha</i> | <i>Cyperus rotandus</i> | 1 part | Rhizome |
| <i>Haritaki</i> | <i>Terminelia chebula</i> | 1 part | Fruit |
| <i>Vibhitaki</i> | <i>Terminelia bellerrica</i> | 1 part | Fruit |
| <i>Amalaki</i> | <i>Emblica officinalis</i> | 1 part | Fruit |

Method of Preparation:-Above drugs will be taken in equal proportion as mentioned in text and will be made in the *yavakuta churna* form and each packets of 350 gm will be made in the NIA pharmacy, Jaipur. 25gm *yavakuta churna* is taken and 8 part water (i.e,200ml) is to be added and it should be reduced to the 1/4th after boiling i.e, 50 ml *kashaya* is obtained.

Administration of Drug: 30 clinically diagnosed and confirmed patients of Dyslipidemia were administered *Guduchibha-*

main responsible factors, so the drug should be selected in such a way that it affects on the pathogenesis of the disease. For *Medoroga*, many research works have been done in many Institutes. In this study, *Guduchibhadramustadi Kashaya from Charaka Samhita* have been selected.

dramustadi kashaya in dose of 50ml twice a day in empty stomach for 30days.

OBSERVATIONS:

The incidence of Dyslipidemia in different age group was worked out. The highest incidence of hyperlipidemia was seen in the age group of 51-60 years (36.66%), (30%)from 41-50 years, (20%) from 21-30 years , (13.33%) from 31-40 years of age group.

All the patients registered in present trial belonged to only *Dwandaja* type of *Prakriti*

, i.e, (46%) were of *Kapha – Vataja Prakriti*, (60%) had *Raja-shika Prakriti*,

(63.33%) had *Madhyama Ahara Shakti* , *Meda sara* i.e (40%), (86.67%) *Madhyama*

abetes Mellitus , and (13%) had a family history of cerebrovascular

accident, (58.33%) were without any relevant family history. Regarding *Aharaja Ni-*

| Sign & symptoms | Mean | | D | Relief in % | S.D ± | S.E ± | t | p | R |
|-------------------------|------|------|-----|-------------|-------|-------|------|--------------|------|
| | B.T. | A.T. | | | | | | | |
| <i>Kshudraswasa</i> | 2.1 | 0.6 | 1.5 | 71.42 | 0.70 | 0.22 | 6.70 | 0.003 | S |
| <i>Kshudaadhikya</i> | 1.2 | 0.2 | 1 | 83.33 | 0.47 | 0.14 | 6.70 | 0.003 | H.S. |
| <i>Pipasaadhikya</i> | 1.5 | 0.5 | 1 | 66.66 | 0.94 | 0.29 | 3.35 | 0.03 | S |
| <i>Daurbalya</i> | 2.5 | 0.7 | 1.8 | 72 | 1.03 | 0.32 | 5.51 | 0.003 | S |
| <i>Swedaadhikya</i> | 1.5 | 0.6 | 0.9 | 60 | 0.73 | 0.23 | 3.85 | 0.01 | S |
| <i>Atinidra</i> | 1.9 | 0.7 | 1.2 | 63.19 | 0.42 | 0.13 | 9 | 0.002 | HS |
| <i>Gaurava</i> | 2.4 | 0.5 | 1.9 | 79.16 | 0.87 | 0.27 | 6.86 | 0.002 | HS |
| <i>Krichhavyavayata</i> | 0.5 | 0.3 | 0.2 | 40 | 0.42 | 0.13 | 1.5 | 0.50 | NS |
| <i>Daurgandhya</i> | 1.2 | 0.8 | 0.4 | 33.33 | 0.51 | 0.16 | 2.44 | 0.12 | NS |
| <i>Palpitation</i> | 1.5 | 0.3 | 1.2 | 80 | 0.42 | 0.13 | 9 | 0.002 | HS |
| <i>Angasada</i> | 1.9 | 0.7 | 1.2 | 63.15 | 0.42 | 0.13 | 9 | 0.002 | HS |
| <i>Krathana</i> | 1.8 | 1.2 | 0.6 | 33.33 | 100 | 31.62 | 0.01 | 0.03 | S |

Sattva, *Madhyama Kostha* found in (46.67%), (33.33%) were hypertensive's , (26.67%)had a family history of coronary artery disease , (20%) had a family history of obesity , (16.67%) had a history of Di-found in (30%) & *Ati Bhojana* (23.33%). Regarding *viharaja Nidana* (40%) were not doing any

dana Snigdha ati Sewana (50%) ,*Madhura Ati Sewana* (43.33%),*Adhyasana* (36.67%),Indulgence in *Guru AtiSevana* and *Pistanna Ati Sevana* was

Table.No.17. Showing the pattern of physiological changes (i.e, **BODY WEIGHT, BMI & WAIST CIRCUMFERENCE**) in 30 patients of Dyslipidemia.

OB- JEC-
TIVE CRI-
TERIA

Table.No.18. Showing the pattern of recovery of Objective criteria in 30 patients of Dyslipidemia (Medo Roga) treated with Guduchibhadramustadi kashaya

| OBJ. TERIA | CRI- | Mean | | D | Mean | D | Relief in % | S.D ± | S.E ± | t | f | S. D± | S. E± | t | P | R |
|------------------------|------|-------|-------|-----|------|---|-------------|-------|-------|---|---|-------|-------|-------|------|---|
| | | BT | AT | | | | | | | | | | | | | |
| Relief in % | | | | | | | | | | | | | | | | |
| T.CHOLESTEROL | | 209 | 194 | 14 | 6.79 | | | | | | | 4.0 | 1.2 | 11.01 | 0.00 | H |
| | | .1 | .9 | .2 | | | | | | | | 7 | 8 | 01 | 01 | S |
| Sr.TRIGLYCERIDE | | 167 | 157 | 10 | 6.19 | | | | | | | 3.0 | 0.9 | 10.86 | 0.00 | H |
| | | .8 | .4 | .4 | | | | | | | | 2 | 5 | 86 | 01 | S |
| Sr.HDL | | 45.9 | 43.2 | 2.7 | 5.88 | | | | | | | 4.2 | 1.3 | 1.98 | 0.07 | N |
| | | | | | | | | | | | | 9 | 5 | 8 | | S |
| Sr. LDL | | 109.6 | 100.9 | 8.7 | 7.93 | | | | | | | 5.8 | 1.8 | 4.68 | 0.00 | S |
| | | | | | | | | | | | | 6 | 5 | 8 | 1 | |
| Sr. VLDL | | 31.8 | 29.8 | 2 | 6.28 | | | | | | | 1.4 | 0.4 | 4.29 | 0.00 | S |
| | | | | | | | | | | | | 9 | 7 | 4 | 2 | |

DISCUSSIONS:

Dyslipidemia is the disease of *Ag-nivikriti* and *Dhatuvikriti*. Formation of *Ama Dosha* at different levels is the main *Samprapti* responsible for the disease So for the *Samprapti Vigatana* of the disease, the drug should remove *Ama Dosha* at various levels, correct the *Agni* and cleanses the *Srotas*. In this formulation, *Guduchibhadramustadi kashaya* have *Laghu*, *Ruksha*, and *Tikshna Guna*. *Lagu guna* is *Kaphagna*, promotes *Vata Dosha* and depletes the quantum of *Dhatu*s in the body. *Ruksha Guna* also promotes *Vata Dosha* and pacifies *Kapha* and *Meda Dhatu*s. *Tikshna Guna* promotes *Pitta Dosha* Pacifies *Kapha Vata Doshas* and possesses *Srotoshodhaka* activities. Most of the drugs of *Guduchibhadramustadi kashaya* have *Katu* and *tikta rasa*. *Katu rasa* stimulates *Pachakagni* dessicants the food, removes obstruction, dilates the passages and allays *Kapha dosha*. *Tiktarasa* is

akasha and *Vayu Mahabhuta Pradhana* and it's main pharmacological action is *Amapachana*. It absorbs *Kleda*, *Meda*, *Vasa* and *Kapha Dosha*. All these drugs have *katu Vipaka* which promotes *Dhatwagni*.

Out of 5 ingredients of the trial formulation 4 drugs are having *Ushna virya*, which helps in digestion of *Ama*, pacifies *Kapha* and *Vata Doshas* and promote *Pitta Dosha*, it is exothermic, increases basal metabolic rate. All these properties are opposite to properties are opposites to properties and composition of *Medo Dhatu* which is *Parthiva* and *Jala Mahabhuta Pradhana* owing to which it functions for *Samprapti Vighatana* of *Medo Dusti* precipitated by *Dhatwagnimandhyata*. All these quality helps in *Amapachana* correct *Agni vyapara* all over the body, remove *Srotorodha* and corrects the defects in *Dhatu parinama*. All drugs have *Lekhaneeya* property. This drug act all over the body, both in *Srotasas* and *Dhatu*s and re-

moves Accumulated *Dhatus & Malas*. These drugs have *Anulomaka* property, which keeps *Dosha* in *Anuloma* state. All drugs are *Kapha shamaka* which is the predominant *Dosha* in the origin of the disease. These drugs having *Vatashamaka* property, two drugs are having *Pittashamaka* property, As a result the treatment does not cause vitiation of *Doshas*.

Since the drugs correct the *Agni vyapara* and remove the *Ama Dosha* at different levels, ultimately correct the *Dhatuvikriti*, which is not witnessed even after stopping the medicines. The condition reoccurs only if the patient indulges again in *Nidana Sevana* continuously for long time.

According to Modern pharmacology *Mustaka* contain β -sitosterols. These non absorbable plant sterols inhibit cholesterol absorption in intestines and increase cholesterol excretion with feces. It results in increased intake of cholesterol to form bile acids in Hepatocytes, and the resultant up regulation of hepatic LDL receptors in turn lowers plasma LDL concentrations by reverse cholesterol transport mechanism.

Various research carried out have shown that hepatoprotective and antihepatotoxic actions of *Mustaka*. These properties are the advantage of *Ayurvedic* Medicine over the modern lipid lowering drugs which causes most deleterious effects on liver. Most of the drugs in this trial have hypolipidemic, anti-inflammatory, antioxidant, anticoagulant, hypotensive and cardiogenic properties.

CONCLUSION

Study on changes of lipid profile have revealed that there was highly significant reduction in the level of serum cholesterol in all the patients. All the above findings suggest that the trial drug used, act synergisti-

cally. No major side effects were noticed except slight abdominal discomfort and loose motions just after taking medicine in some of the patients, which were controlled after adjusting the dosage of *kashaya*.

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