

A CLINICAL STUDY OF GUDUCHIBHADRAMUSTADI KASHAYA AND NAVAKA GUGGULU IN THE MANAGEMENT OF MEDOROGA WITH SPECIAL REFERENCE TO DYSLIPIDEMIA.**Dr. Bikash Raj Ghimire^{1*}, Prof. Sanjay Pokharel² and Amrita Ghimire³, Dr. Samichha Neupane⁴ and Dr. Shwetha Kumari Pokharel⁵**¹Senior Consultant, National Ayurveda Research and Training Center, Kathmandu, Nepal.²Professor, Central Ayurveda Campus, Nepal Sanskrit University, Dang, Nepal.³Phd scholar, Nepal Sanskrit University, Dang, Nepal.⁴Consultant, District Ayurveda Health Centre, Kavre, Nepal.⁵Asso. Professor, Nepal Sanskrit University, Dang Nepal.***Corresponding Author: Dr. Bikash Raj Ghimire**

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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, This study was taken by seeing the present statistics of the incidence and prevalence of Dyslipidemia. Two indigenous drugs *Guduchibhadramustadi kashaya* and *Navaka Guggulu* were taken and efficacy and safety profile of both the formulations has been carried out in 3 different groups of 10 patients each. Group I administered with *Navaka Guggulu 500mg 2tab BD*, Group II with *Guduchibhadramustadi kashaya 50ml BD* and Group III with both combined formulations were carried out. Result and Discussion reveal that Group III administered with both the formulations have shown the good result in relieving both subjective and objective criteria after the course of 1 month.

KEYWORDS: Dyslipidemia, *Navaka Guggulu* & *Guduchibhadramustadi kashaya*.**INTRODUCTION**

Excessive body fat and its metabolic consequences are worldwide epidemics.^[1] 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. Plasma lipoproteins levels are major modifiable risk factors for cardiovascular disease.^[2] Increased level of atherogenic lipoproteins contribute to the development of atherosclerosis, 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 Vihara Agnimandya* is developed. Due to *Agnimandya*, *Ama Dosha* is formed resulting in *Ama Annarasa*. This *Samarasa* circulates in the body and vitiate *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 Dhatu*s become *Sama* and ultimately *Medo roga* results.

METABOLIC SYNDROME^[3]

Clinical diagnosis requires more than 3 of the following risk factors

Abdominal Obesity (waist circumference): Men > 102 cm (40 in), Women > 88 cm (35 in) λ Elevated Triglycerides > 150 mg/dL
 Reduced HDL cholesterol: Men < 40 mg/dL, Women < 50 mg/dL
 Hypertension > 130/86
 Impaired fasting glucose > 100 mg/dL

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). Lots of research have been submitted on the various aspects of the 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*^[4] and *Navaka Guggulu*^[5] for the research purpose.

MATERIALS AND METHODS

1. Selection of cases

The study was conducted on 30 clinically diagnosed and confirmed patients of dyslipidemia from OPD/IPD of National Ayurveda Research And training Center, Kathmandu Nepal

A. Inclusion criteria

- Patients between the age group of 20-60 years of either sex.
- Patients willing to sign the consent form.
- Patients having sign and symptoms of *medoroga*.
- Diagnosed and confirmed cases of dyslipidemia & *Medoroga* on the basis of laboratory investigations.

B. Exclusion criteria

- Patients with age below 20 yrs. & above 60 yrs.
- Patients suffering from diseases like nephritic syndrome, hypothyroidism, jaundice, hepatitis, chronic infections & other serious diseases.
- Patients having dyslipidemia due to drugs e.g. glucocorticoids, diuretics.
- Patients having severe increase in total cholesterol level i.e. more than 300mg/dl.

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 by 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.

SELECTION OF DRUGS

In pathogenesis of *Medoroga*, *Agni* and *Meda Dhatu* are two main responsible factors, so the drug should be

selected in such a way that it affects on the pathogenesis of the disease. In this study, *Navaka Guggulu* have been selected on the basis of recommendation of *Bhaisajya Ratnavali*^[1] as indicated in *Medoroga Adhikara & Guduchibhadramustadi Kashaya* as indicated in *Charaka Samhita*.^[2]

Administration of Drug

30 clinically diagnosed and confirmed patients of Dyslipidemia were randomly divided into 3 Groups of 10 each as below:

Group I-10 patients were administered *Navaka Guggulu* for 30 days in the dose of 2 tab twice a day along with luke warm water in empty stomach water for 30 days.

Group II-10 patients were administered *Guduchibhadramustadi kashaya* in dose of 50ml twice a day in empty stomach for 30 days.

Group III-10 patients were administered both *Guduchibhadramustadi kashaya* 50ml and *Navaka Guggulu* 2tab 500mg each for twice a day in empty stomach for 30 days.

Statistical presentation and analysis

All the signs and symptoms, blood investigations before trial and after trial were compared & was analyzed statistically.

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*, (46%) were of *Kapha – Vataja Prakriti*, (60%) had *Rajashika Prakriti*, (63.33%) had *Madhyama Ahara Shakti*, *Meda sara* i.e (40%), (86.67%) *Madhyama Sattva*, *Madhyama Kosta* 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 Diabetes Mellitus, and (13%) had a family history of cerebrovascular accident, (58.33%) were without any relevant family history. Regarding *Aharaja Nidana Snigdha Atisevana* (50%), *Madhura Ati Sewana* (43.33%), *Adhyasana* (36.67%), Indulgence in *Guru Atisevana* and *Pistanna Ati Sevana* was found in (30%) & *Ati Bhojana* (23.33%). Regarding *viharaja Nidana* (40%) were not doing any kind of *vyayama*.

OVERALL EFFECTS OF THERAPY RESULTS IN PATIENTS OF GROUP I

Group I patients treated with *Navaka Guggulu* showed 32% Symptomatic relief, 1.29% in T.cholesterol, 0.23% in Sr. triglyceride, 7.93% relief in Sr. LDL, 4.46% in SGOT, 5.66% in SGPT, 2.38% in Alk. Phosphatase, 1.26% in Sr. Creatinine, 5.53% in Sr.Urea. In Group I

moderate relief (25%-50%) was found in signs and symptoms improvement was noticed after the completion of the therapy.

RESULTS IN PATIENTS OF GROUP II

Group II patients treated with *Guduchibhadramustadi kashaya* showed 52% Symptomatic relief ,6.79% in T.cholesterol,6.19% in Sr. triglyceride,7.93% relief in Sr. LDL,4.46% in SGOT,5.66% in SGPT,2.38% in Alk. Phosphatase, 1.26% in Sr. Creatinine, 5.53% in Sr. Urea. In Group II moderate relief (25% -50%) was found in signs and symptoms improvement was noticed after the completion of the therapy.

RESULTS IN PATIENTS OF GROUP III

Group III patients treated with *Navaka Guggulu & Guduchibhadramustadi kashaya* showed 60% Symptomatic relief ,12.82% in T.cholesterol,18.9% in Sr. triglyceride,15.87% relief in Sr. LDL,4.90% in SGOT, 0.36% in SGPT,10.48% in Alk. Phosphatase, 2.29% in Sr. Creatinine, 12.38% in Sr.Urea. In Group III Significant relief (50% -75%) was found in signs and symptoms improvement was noticed after the completion of the therapy.

PROBABLE MODE OF ACTIONS OF THERAPY

The proposed formulation *Navaka Guggulu (Bhai.Ratna 39/43) & Guduchibhadramustadi kashaya (Cha.Su.21/22)* in this trial are chosen and contents of *Navaka Guggulu (Shunthi, Maricha, Pippali, Chitraka, Haritaki, Vibhitaki, Amalaki, Musta, Vidanga, Guggulu). & Guduchibhadramustadi Kashaya (Guduchi, Musta, Triphala)* in equal proportion except *Guggulu*, other are not directly linked with *Vyadhipratyamik Chikitsa* of *Medoroga*, but other *Dravyas* are having potential to break the basic pathogenesis takes place in *Medoroga*. As discussed earlier, in *Medoroga*, there is *Medaavrutta-Vata (Ch.Su.21/5)*, it is *Kaphapradhan-Medopradoshaj Vikar*. So, to break the pathogenesis of disease, *Dravyas* having properties opposite to *Meda-Kapha* & those which are having *Srotovishodhak, Karshana, Lekhana* properties are required. The combination of *Navaka Guggulu* is having *Guggulu* which is having *Pravabh* of *Medo-Vatahar*. *Acharya Sushruta* also quoted its property of *Lekhana* directly. Dyslipidemia is the disease of *Agnivikriti* 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 , *Navaka Guggulu* have *Laghu ,Ruksha*, and *Tikshna Guna*. *Lagu guna* is *Kaphagna*, promotes *Vata Dosha* and depletes the quatum 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 *Navaka Guggulu & 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 11 ingredients of the trial formulation 8 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 *Agnivyapara* 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 removes Accumulated *Dhatu*s & *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 absorbs 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 & Chitraka*. 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 cardiotoxic properties.

CONCLUSION

It is found that Dyslipidaemia is most common in 3rd to 6th decade of life, & commonly seen in individuals having sedentary lifestyle, faulty dietary habits,

emotionally disturbed individuals. In this clinical study, effects of Group III are more significant than Group I & Group II in both subjective as well as objective parameters, this shows that *Medoroga* which is considered as *Krichhasadhya* by *Acharyas* should be treated with the help of *combined* therapy. *Guduchibhadramustadi kashaya* along with *Navaka Guggulu* i.e. Group III has shown very significant results in reducing serum cholesterol, serum triglycerides, serum LDL & serum VLDL along with highly significant results in Anthropometric parameters i.e. body weight, BMI, waist circumference & significant results with only *Navaka Guggulu & Guduchibhadramustadi kashaya* in Group I & II. Thus, it can be concluded that from the present clinical trial that both the *Navaka Guggulu & Guduchibhadramustadi kashaya* are highly effective in management of the Dyslipidaemia.

Therefore it can be concluded that *Navaka Guggulu* and *Guduchibhadramustadi Kashaya* has a potent hypolipidemic activities and can be used effectively in the management of Dyslipidemia.

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