



International Journal of Indian Medicine

www.ijim.co.in

ISSN: 2582-7634

**Volume - 5, Issue - 7
July 2024**



I J I M

INDEXED



International Journal of Indian Medicine



International Category Code (ICC): ICC-1702

International Journal Address (IJA): IJA.ZONE/258276217634

STUDY OF THE EFFICACY OF THE LEKHANIYA GHANAVATI IN THE MANAGEMENT OF HYPERLIPIDAEMIA IN DM-2 [BSL<250MG/DL]

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ABSTRACT:

Hyperlipidaemia is emerging big problem in present society, which is now increasing day by day because of sedentary lifestyle of people, consumption of junk food, aerated cold drink, high level of stress are further deteriorating the condition. Hyperlipidaemia is major cause in major illness such as HTN, obesity, acute MI, IHD, CCF& DM-2 (<250mg/dl) Previous study of hyperlipidaemia shows that reduction of fraction lipid level reduces rate of morbidity in individual with DM-2 (<250mg/dl), HTN, CAD. In ayurveda Hyperlipidaemia shows close resemblance with Medoroga as per Ayurveda. Lekhniya Gana is specifically indicated in ayurveda literature for management of Medoroga. In current case study 54 yrs female K/C/O DM-2 (<250mg/dl) came with gross elevation of total cholesterol, triglycerides, LDL, VLDL levels. Lekhniya Gana vati with proper pathya aahar was advised to patients for 2 months. Highly significant reduction was observed in total cholesterol level, triglycerides LDL, VLDL levels.

KEYWORDS: Hyperlipidemia, Lekhniya Ghanavati, Medoroga, Diabetes mellitus.

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How to cite this article: Naikwadi R. Study of the efficacy of the Lekhniya Ghanavati in the management of Hyperlipidaemia in DM-2 [BSL<250mg/dl]. Int J Ind Med 2024;5(7):20-26 DOI: <http://doi.org/10.55552/IJIM.2024.5704>

INTRODUCTION:

Hyperlipidaemia is emerging big problem in present society, which is now increasing day by day because of sedentary life style of people, taking junk food, aerated cold drinks and high level of stress. In current modern medical practices, statin have been largely used, but statin in alone or in combination with fibrate increase possibility of side-effects such as myositis, memory loss, liver damage and even economic burden. Hyperlipidaemia require long term treatment. It imposes a tremendous economic burden on individual and ultimately on society. Disorders of lipoprotein metabolism are collectively referred to as dyslipidaemias. Dyslipidaemias are generally characterized clinically by increased plasma levels of HDL cholesterol, triglyceride or both variably accompanied by reduced level of HDL cholesterol. Because plasma lipids are commonly seen, dyslipidaemia is frequently seen in clinical practice. The majority of patients with dyslipidaemia have some combination of genetic predisposition environmental contribution and the dietary recommendations for individuals with DM include increased monounsaturated fat and carbohydrates and reduced saturated fats and cholesterol. Hyperlipidaemia in diabetes type II (<250mg/dl) should be assessed aggressively and treated to avoid many cardiovascular risk factors of it and hyperglycaemia. Previous studies and present remedies of hyperlipidaemia has constantly found that reduction of fractions

of lipids reduce cardiovascular events and morbidity in individual with DM II. (<250mg/dl) Diabetes was recognised as a disease entity in ancient Indian System. The disease was described in Charaka Samhita in 600 BC and in Sushruta Samhita in 400 BC. Perhaps the disease is as old as mankind. Hyperlipidaemia is emerging big problem in present society, which is now increasing day by day because of sedentary life style of people, taking junk food, aerated cold drinks and high level of stress. The prevalence of hyperlipidaemia is very high in India which calls for urgent lifestyle intervention strategies to prevent and manage this important cardiovascular risk factor. So, to find out effective herbal formulation which will have less side effects and will cause low economic burden. This topic was selected for the study purpose mentioned in Charaka Samhita, as a Lekhaniya Gana in Sutrasthana Adhyaya 4/3.2.

OBJECTIVE OF THE STUDY- To study the role of Lekhaniya Ghanvati on signs and symptoms of Hyperlipidaemia DM- 2. (<250mg/dl)

MATERIAL AND METHODS -

PATIENT- Total 50 patients of Hyperlipidaemia DM 2. (<250mg/dl) from OPD and IPD unit of LBVKAC & HOSPITAL LATUR.

TOTAL DURATION OF STUDY - 2 months

FOLLOW-UP - 3 follow-up, after 15 days.

DRUG - for the present study Lekhaniya Ghanvati was used for management of Hyperlipidaemia.

DETAILS OF LEKHANIYA GHANVATI -

SN.	Drug	latin name	Part used	quantity
1.	Musta -	Cyperrus rotundus -	mula (root) -	1 part
2.	Kushta -	Saussurea Lappa -	Mula (Root) -	1 Part
3.	Haridra -	Curcuma longa -	Kanda (Rhizomes)-	1 Part
4.	Daruharidra -	Berberis Aristata -	Mula (Root)-	1 Part
5.	Vacha -	Acorus Calarus-	Kanda (Rhizomes) -	1 Part
6.	Ativisha -	Aconitum heterophyllum_ -	Kanda (Rhizomes) -	1 Part

7.	Katurohini -	Picrorrhiza Kurroa -	Mula (Root)-	1 Part
8.	Chitraka -	Plumbago Zeylanica_ -	Mulavaril Sal (Root)-	1 Part
9.	Chirbilva-	Holoptelea Intergrifolia_ -	Twacha-	1 Part

Method of preparation of Lekhaniya Ghanvati

The useful parts of Musta, Kushta, Haridra, Daruharidra, Vacha, Ativisha, Katurohini, Chitraka and Chirabilva were taken in appropriate quantity and 16 parts of water is added to it. It was heated on medium flame and thoroughly mixed. The heating process was continued until the mixture was free from water and it is in the cake form 'Ghana' and then a Ghanvati of 500 mg was prepared as per mentioned in Ayurvedic classics.

Criteria for Diagnosis-

Inclusion criteria

1. Hyperlipidemia in DM-II (<250mg/dl). having BSL random less than or equal to 250 mg/dl taking standard care of treatment.
2. Age group of patients 30 to 60 yrs.

Exclusion criteria

1. The patients suffering from IHD, acute MI, CCF, insulin dependent DM (type 1), malignancy, AIDS, pregnancy, Lactating women, Hypothyroidism.
2. Hyperlipidaemia in DM-II having BSL random more than 250mg/ dl.

Details of drug administration

Drug -	Lekhaniya Ghanvati
Form of drug -	Ghanvati
Dose - 250 mg -	2 tablets B.D
Anupana -	Koshnajala
Sevanakala -	twice a day Bhojanapura
Duration -	Two months
Diet -	As per pathyakara Ahara mentioned in Ayurvedic classics

Assessment criteria -

1. Lipid profile

Total cholesterol

Criteria -	Grade
0-180	0
180-220	1
220-240	2

HDL

Criteria	Grade
More than 60	0
40-60	1
35-40	2
30-35	3
Less than 30	4

LDL

Criteria	Grade
Less than 130	0
130-150	1
150-200	2
200-240	3
More than 240	4

Triglyceride

Criteria -	Grade
Less than 150 -	0
150-250 -	1
250-300 -	2
300-500 -	3
More than 500 -	4

2. Urine (albumin)

Criteria	Grade
Absent	0
+	1
++	2
+++	3
++++	4

3 BMI

BMI	Grade
18-25	0
25-30	1
30-35	2
More than 35	3

4. Waist to hip ratio

Men -	0.93
Women -	0.84
More than 1 indicate	abnormal

5. Weight

Laboratory investigation

Following laboratory investigations will be carried out before the treatment to rule out any other pathology.

1. Hb%, CBC
2. Urine routine and microscopic
3. Lipid profile
4. Serum Urea
5. Creatine serum
6. Tridot
7. ECG

Assessment of total effect of therapy

Percentage-	Result
0-25% -	No Change

26-50%-	Mild Improvement
51-75% -	Moderate improvement
76-99% -	Marked improvement
100%-	Complete cure

RESULTS

It showed that the Lekhaniya Ghanavati has role of Shamana therapy in Hyperlipidaemia. Calculated 't' of Lakshana shows that improvement in Lakshanas were seen highly significant except BMI. Statistically highly significant difference was observed in weight, waist to hip ratio before and after treatment.

Statistical Analysis

Parameter	-n-	Mean (BT AT)- -	Mean difference	SD -	t-	p
Swedati Pravrutti.	50 -	1.1 0.1 -	1	0.3642	35	<0.001
Gaurav	50 -	1.14 - 0.16 -	0.98 -	0.4046	49 -	<0.001
BMI.	50 -	0.42 - 0.18 -	0.24 -	0.5379	3.99366 -	<0.001
Weight.	50 -	67.0 4 - 64.12 -	2.92 -	6.9340	12.05779 -	<0.001
Total Cholesterol.	50 -	0.28 - 1.4 -	1.12	0.9048	5.0360 -	<0.001
HDL	50 -	0.96 - 0.5 -	0.46 -	0.9253	2.6743 -	<0.001
LDL.	50 -	0.04 - 1.22 -	1.18	0.7895	3.2721 -	0.00098
Triglyceride -	50 -	0.2 - 0.24 -	0.04 -	0.9085	6.4261 -	<0.001
Urine.	50 -	0 - 0 -	0	0.3015	3.5	<0.001

Statically the parameters ke Swedati Pravrutti, Gaurava, BMI, Weight, Total cholesterol, HDL, LDL, Triglyceride, Urine showed highly significant results.

DISCUSSION:

Medaroga is a well described disease from Samhita period. Acharya Charak mention it in Ashtounindito- Purush Adhyaya (Su.21). Medoroga is another term, used for the disease Medoroga. Madhavakara has explained Medoroga in separate chapter i.e. 34 chapter of Madhav Nidan and he used the synonyms as Medosvina, Atisthula and Sthula etc. according to Charaka one of the main causes for Medoroga i.e the Beejdosh Swabhavata. According to the World Health Report 2002 of W.H.O. Hyperlipidaemia is under the 10 top selected risks to the health.

it is alarming disease with its hazardous complication i.e. hypercholesteremia, ischemic cardiac disorders, HTN, DM etc. BMI (Body Mass Index) more than 25 indicate increasing risk to health Much more research work has been done on Hyperlipidaemia or still there is lot of scope to work in the area of its etiopathology and the treatment of Hyperlipidaemia. The word Medoroga had indicates the deposition of Prithvi Jala Mahabhut which is dominant factors in the body. Nidana of Medoroga is divided in 4 categories. 1. Aharatmaka, 2 Viharatmaka, 3. Manasa and 4. Anya. Besides these Nidanas, it can be seen that due to diet enriched with maximum % of carbohydrate, fats and high-tech machineries which makes a person less active and prone to Medorog

Samprapti of Medoroga divided in two categories

1. According to Charaka Samhita in which, increased Jatharagni → Maximum ingestion → maximum absorption of Prithvi, Jala. Mehahhuta → dominant factors in the body leads to increased Medodhatu in the body

2. According to Dalhana in which, Medodhatvagni Mandya → leads to excessive formation of improper Medodhatu leads to Medoroga. From various classics the Rupas of Medorog are compiled Some of them are agreed by most of Acharyas. Most of the symptoms are related to abundant growth of Medodhatu in the body. Some of the symptoms of medoroga, occurs due to extra accumulation of meda in fat depots leads to Chalatra of the various organs of the body, Kshudrashwasa, Anga Gauravata and other signs and symptoms. Lekhaniya Ghanavati with Koshna Jala for the treatment of Medoroga was selected for the present study by considering its significance mentioned in Ayurvedic texts. Out of all these Lekhaniya Gana Dravyas, Musta Chitraka Vacha, these drugs are good Deepana Pachana, they improve the digestive function of body and reduce the Aama. Bad cholesterol is resultant factor of improper digestion and increased Aama in body. In Ayurvedic Classics, cholesterol is not mentioned anywhere but meda dhatu is mentioned. To balance the Meda Dhatu is equal to balance cholesterol. We have to improve the quality of Medo Dhatu. Meda Dhatwagni Vriddhi is also important in such case. All Charakokta Lekhaniya Gana Dravyas are Tikta Kashaya Rasatmaka, Ruksha Gunatmak and most of them are Ushna Viryatmak. With these properties all the contains of Lekhaniya Gana are supposed to act on Aama, increased Dhatwagni Jatharagni and are antioxidants. Hence this Lekhaniya Gana is selected. Dose of Lekhaniya Ghanavati was kept 1gm twice a day, before of meal (Pragbhakto). This

average dose is for the person of age between 21 to 60 years and also considering with Sadharana Desha, Madhyam Bala and Kashtasadhya of Medoroga. Koshna jalapana acts as a Kaphdosta Nashak and Medaghna. Therefore, Koshna Jala was given as Anupana based on Ayurvedic text. In the present study maximum 56% patients were from the age group of 51 to 60 years. After that 32% patients were from the age group of 41 to 50 years followed by 6% patients from 21 to 30 years and 31 to 40 years each. So, Hyperlipidaemia found more in old age. Modern text books also support the same observations ie. In old age between 50-60yrs due to atherosclerotic changes Hyperlipidaemia may occur. Maximum patients le 70% patients were female, because they may have a tendency to develop fatty mass. Modern texts support this observation. In young women, body fat stores may be below 30 percent and increase gradually to more than 35 percent in older women whereas in men it increases up to 25 percent only (Harrisons Principles of Internal Medicine). The reason behind this observation might be the feminine factors like pregnancy, post operating condition, use of oral contraceptives, menopause etc. are predominant factors, which makes female an obese. Maximum patients Le: 72% were Hindu; this may be the representation of the total community distribution in the city and surrounding from where most of the patients came. Maximum patients le. 42% were house wife. The reason behind this might be light nature of work, advancement of new techniques, tools (mixers, washing machines). Followed by 26% patients were in service. The reason behind this might be light nature of work i.e. Sedentary lifestyle, long time sitting work in front of computer, dietary habits, advancement of new techniques etc. tools (e.g. Mixers, washing machines) which reduces energy expenditure and besides

these the most important cause is Divaswapa. Maximum patients i.e. 86% were educated. It clearly shows that education has its relation with health consensus because as the education level increases health awareness increases. In these study maximum patients i.e. 84% were recorded as Married. Moreover, married female found obese in comparison to unmarried, owing to hormonal imbalance occurring after marriage, in pregnancy. Maximum patients i.e. 58% were belonging to Middle class. From this observation it cannot be said that Hyperlipidaemia has dominance in Middle class. Person from Upper Class can afford costly medicine and can attend better hospitals for the health care. Persons from middle class are health aware but cannot spend much more money for their health so they always prefer the hospitals where medicine is provided free or at low cost. Besides this in lower class due to improper nutrition prevalence of Hyperlipidaemia is less. Majority of the patients i.e. 86% were having mixed diet. This mixed diet enriches with oil, butter, Ghrita, Payas, Vikara causes production of extra fat which leads to conditions like Hyperlipidaemia. Maximum Patients i.e. 66% patients had Kapha-Vata Pradhan and 22% patients had Kapha-Pitta type of Prakriti, 18% Vata-Pitta Pradhana. Thus, 90% patients Prakriti was Kapha dominant either associated with Vata or Pitta. Maximum patients i.e. 88% had Madhyama Koshtha. In normal condition, Madhyam Koshtha found due to Kapha dominancy. Maximum patients 44% were consuming excess Snigdha in their daily diet, while Guru 50% were dominant Guna in the diet of patients and Katu 46%, Tikta 44% and Madhura 4%. Kapha and Meda are main Dosha and Dushya respectively in the pathogenesis of Hyperlipidaemia. Among 50 patients, maximum all patients were consuming Snigdha 44%, Guru 50%, Madhura 4% as Aharatmaka Nidana. This data showed

that most of the patients are including those Aharaja Nidana aggravates Kapha Dosha and Meda Dushya it causes excessive accumulation of Meda in body. 74% patients did Awyayam. Lack of physical activity i.e. Avyayam as major cause of Hyperlipidaemia. After giving Lekhaniya Ghanavati to the patients of Hyperlipidaemia, significant relief in symptoms Kshudrashwas, Swedapravrutti, Daurabalya, Atinidra was observed. So, we can conclude that combination of Tikta, Katu, Kashaya, Laghu, Ruksha Guna, Katu- Vipaka Pradhana drugs in having the properties of Strotovibandhanashana and against Kapha, Kleda and Meda and Medodhatvagni, which gives good results in all signs and symptoms of Hyperlipidaemia.

Probable mode of action of Lekhaniya Ghanavati

The mode of action of Lekhaniya Ghanavati on Hyperlipidemia can be explained as follows; The Hyperlipidaemia originates due to excessive consumption of Kapha Vrudhikara Aahara, Vihara and Manasa Nidana. These factors derange the Jatharagni and that causes production of Aama Annarasa, that results in Medodhatvagnimandya. Lekhaniya Ghanavati counters Kapha Dosha by its Tikta, Katu, Kashaya Rasa dominance, Katu Vipaka and Laghu, Ruksha Guna. Meda and Kleda are the main culprits in Hyperlipidemia. Tikta, Kashaya Rasa had Medopashoan and Medovishoshankarma. Laghu, Ruksha Guna perform Medo-Kledopa-Shoshana and Lekhana Karma. Tikta Rasa encounters Dhatwagnimandya and potentiates the weakened Dhatwagni which helps in Aampachana. Due to Deepana and Pachana action of Tikta Rasa and Lekhanakarma of Tikshnaguna Strotorodha is broken. All the involved channels are dilated i.e. Strotansi Vivrunoti action is seen. Katu, Tikta, Kashaya Rasa, Katu Vipaka and Laghu, Ruksha Guna check over Medovaha and Mansavaha Strotodushti. Lekhaniya Ghanavati has Tikta,

Katu, Kashaya Rasa, Laghu, Ruksha Guna, Katu Vipaka, Kaphashamaka, Kleda Shoshana, Karshana, Lekhaniya, Medorogahara, Aampachana, Dhatu Shoshana properties, which normalize the state of Dhatwagni. Thus, regulated Dhatwagni and reduces the excessive growth and accumulation of Medodhatu and it causes Lakshanopshamana of the disease Hyperlipidaemia. During the clinical trials, it was observed that maximum symptoms of patients decrease after one month of starting the medication. During 2 months, avoid Guru, Snigdha, Madhura diet was advised to the patients of Medoroga.

CONCLUSION:

According to statistical analysis, it is concluded that the Lekhaniya Ghanavati is more effective in Hyperlipidaemia in DM2. <250mg/dl. It has more effect on symptoms such as Kshudrashwasa, Gaurava, Swedapravritti, Daurbalya and also on objective parameters such as BMI, Waist to Hip Ratio, Weight, Lipid profile, Urine albumin etc. During treatment of two months there was no any side effect found. Statistically it has been proved that Lekhaniya Ghanavati is one of the best drugs of choice for the treatment of Hyperlipidaemia. is emerging big problem in present society, which is now increasing day by day because of sedentary life style of people, taking junk food, aerated cold drink and high level of stress. The positiveness is observed in case of Ayurvedic

management is absence of hazardous effect, which is really beneficial to the patient and is of vital importance in view of the global acceptance of Ayurveda. In this way by taking all the parameters of Hyperlipidaemia into the consideration it was seen that Lekhaniya Ghanavati with Koshna Jala was effective in reducing Hyperlipidaemia in DM2. <250mg/dl. Results of this study are encouraging and trial should be conducted on large sample size and for longer duration.

REFERENCES:

1. Harrison's Principles of Internal Medicine edited by Kasper, Fauci, Hauser, Longo, Jameson, Loscalzo, 19th edition, vol2, Lipoprotein Disorders, pg.2443
2. Harrison's Principles of Internal Medicine edited by Kasper, Fauci, Hauser, Longo, Jameson, Loscalzo, 19th edition, vol2, Diabetes Mellitus,
3. Charak Samhita edited by Dr. Brahmanand Tripathi, Chaukhamba Bharati Prakashan, Varanasi reprint 2011, sutrasthana 4/8; pg. 76
4. Davidson's Principles and Practices of Medicine edited by Nicki R. Colledge, Brian R. Walker, Stuart H. Ralston, 21st edition 2010, Lipid metabolism, pg 449
5. Dravyagun Vidnyana edited by Acharya Priyavad Sharma, Chaukhamba Bharati Academy, Varanasi reprint 2013
6. Sharagdhara Samhita edited by Dr Brahmanand Tripathi, Chaukhamba Surbharati Prakashan, Varanasi reprint 2013, Vatkakalpana;

Source of Support: None declared

Conflict of interest: Nil

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An Official Publication of ARCA- AYURVEDA RESEARCH & CAREER ACADEMY

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