

# A Case Study on the Management of Dyslipidemia (Medoroga) by Ayurvedic Intervention.

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## Abstract :

Dyslipidemia is a metabolic disorder associated with complications which leads cardiovascular disease (48%). The global Burden of disease study has estimated that death rates from coronary artery disease increasing in India. Recent studies have reported that high cholesterol is present in of 25-30% of urban and 15-20% in rural subjects. The most common dyslipidemia in India are borderline high LDL cholesterol, low HDL cholesterol and high triglyceride. It can be correlated with Medoroga in Ayurveda. A 50 years old male patient treated in the OPD of Central Ayurveda Research Institute, Guwahati from 20<sup>th</sup> February 2024 with a complain of heaviness in the body and inability to do work along with previous history of dyslipidemia. The case was diagnosed as the diagnostic criteria mentioned in Ayurvedic texts about medoroga and the criteria of dyslipidemia mentioned in third report of the National Cholesterol Education Programme (NCEP). Expert panel on Detection, Evaluation and treatment of High Blood Cholesterol in Adults. Different Ayurvedic herbomineral drugs which were mentioned in different texts were given to the patient. The formulations used here were vidangadi lauha, Arogyvardhini vati and Arjuna Churna. It shows the effective results in the management of dyslipidemia (medoroga).

Key words: Medoroga, Dyslipdemia, vidangadi lauha, Arogyvardhini vati and Arjuna Churna

## INTRODUCTION

Dyslipidaemia is a metabolic disorder which is risk factor of many diseases like cardiovascular disorder, hypertension etc. here mainly lipoprotein metabolism disturbed. It comes under non communicable diseases and most leading cause of CVD (48%).Here serum cholesterol , serum triglyceride, low density lipoprotein, very low density lipoprotein or any one may increase. There is evidence also that stroke occurs more in Indians in American and European.<sup>1</sup> The global Burden of disease study has estimated that death rates from coronary artery disease increasing in India.<sup>2</sup>

Recent studies have reported that high cholesterol is present in of 25-30% of urban and 15-20% in rural subjects. The most common dyslipidemia in India are borderline high LDL cholesterol, low HDL cholesterol and high triglyceride.<sup>3</sup>

Dyslipidemia is not directly mentioned in Ayurvedic texts but the concept of vitiated meda which is baddha and AbaddhaMeda<sup>4</sup> mentioned by Acharya Chakrapani have similarity with the condition of Dyslipidemia describe in contemporary science.

There are many experimental and clinical studies have done which proved that the drugs mentioned as medohara, deepan pachan act on dyslipidemia. The medicines should be cost effective and easily available. Here in this study vidanadi lauha, arogyavardhini vati and arjuna churna was given which are cost effective and easily available.

#### Patient information

A male patient, aged 50 years was registered from the O.P.D(OPD-1240 of 2024),of Central Ayurveda Research Institute, Guwahati under CCRAS.

#### Chief Complaints

Patient came with the following chief complaints and increased level of total cholesterol, LDL, VLDL and Triglyceride.

1. Heaviness in body(Angagaurav).
2. Inability to do physical work.

#### History of Present Illness

Patient was asymptomatic before 12 months, then he developed heaviness in body and inability to do physical work, Patient got treatment from many other doctors but could not get relief completely. So patient came to CARI, Guwahati on 20<sup>th</sup> February 2024 and he was advised to do the lab investigation for better treatment. On 22<sup>nd</sup> he has done his investigations and treatment was started from 23<sup>rd</sup> February 2024.

History of Past Illness-No history of Diabetes Mellitus, Hypertension, Hypothyroidism.

Family History – No, H/O Dyslipidemia

General Examination

General condition- average ,

Pulse rate - 76/min

B.P.-130/78mmHg

Respiratoryrate-20/min

Temperature -98.8F Height-162 cm,

Weight-65kg,

BMI-24.76kg/m<sup>2</sup>(i.e.within normal limit).

Systemic Examination - No abnormality was detected in Gastro-intestinal, Respiratory, Cardiovascular and Nervous system.

### **Ashtavidha Pariksha**

Nadi-Kapha tritdosaja.

Mutra (urine) - Normal

Mala (stool) – normal

Jihwa(tongue)- uncoated

Shabda(speech)-Normal

Drika- normal

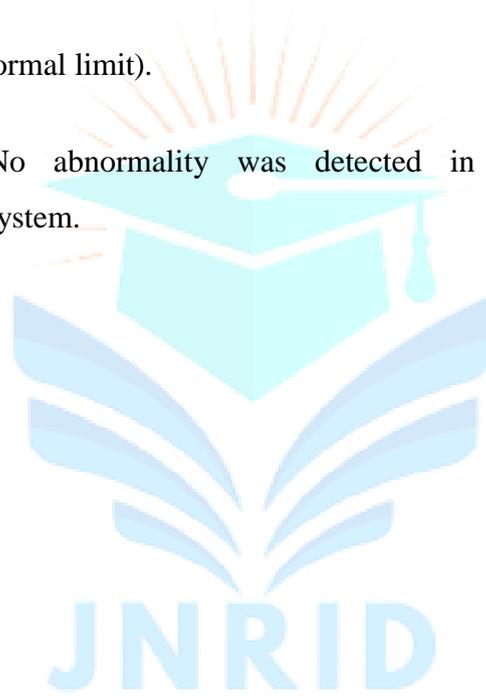
Sparsha-Normal

Akriti- Normal

### **Dasavidhapariksha:**

Prakriti: Vata kapha

Vikriti:Kapha vata and medodushti



Sara:Mamsasara

Samhanan: Pravara(BMI- 24.8 kg/m<sup>2</sup>)

Satmya: Madhyama

Satwa: Tamashik

Praman: pravara

Ahara Shakti: Avara

Vyama Shakti:Avara

Vaya: Madhyavastha

**Timeline** : The timeline is depicted in table 1 and 2

**Diagnostic criteria:** The case was diagnosed as the diagnostic criteria mentioned in Ayurvedic texts about medoroga and the criteria of dyslipidemia mentioned in third report of the National Cholesterol Education Programme(NCEP), Expert panel on Detection, Evaluation and treatment of High Blood Cholesterol in Adults. According to NCEP (National cholesterol education program, Following range values were taken for diagnosis of dyslipidemia.

▶ LDL Cholesterol:- Optimal : <100

Near optimal/above optimal : 100-129

Borderline high: 160-189

Very high: ≥190

▶ Total Cholesterol:- Desirable: <200

Borderline high: 200-239

High: ≥240

▶ HDL Cholesterol:- Low: <40

High: ≥60

- ▶ Triglycerides:- Normal: <150 mg/dl
- Borderline-high: 150-199 mg/dl
- High: 200-499 mg/dl
- Very High: ≥500 mg/dl

**Therapeutic interventions:**

The therapy had been given to the case after diagnosed the case as dyslipidemia and medoroga according to Ayurveda. The formulation prescribed here was taken from Ayurvedic texts. Here in this case vidangadadi lauha was given , which is mentioned as medorogahara in BhesajyaRatnavali. It was given in a dose of 250 mg twice daily before food. Along with this Arogyavardhini gutika was given in the dose 500 gm twice daily after food in medoroga.<sup>5</sup> Arjuna bark powder also given in 3 gm twice daily which is a medorogahara drug.<sup>6</sup>

**Diet and lifestyle modification:** Patient was advised to use of old and red variety of rice, barley, horse gram alongwith vegetables like bottle gouard, bitter guard, drums stick, ginger, and garlic and butter milk in meals. Advised to avoid fried and sweet food items, potato, curd, aerated drinks and raw milk possibly and have to daily 30 minutes brisk walking in morning and evening.

Follow up and outcome: During intervention period follow up was taken. Follow up was taken for both subjective and objective criteria. An overall changes was found in both criteria. Improvement was found in feeling of heaviness in the body, inability to do physical exercise along with reducing lipid profile. No adverse reaction was found and drugs were found safe.

Table 1

Date	Intervention along with diet and life style modification	Observation
		Subjective criteria
23-02-2024 to 06-03-2024	Vidangadi Lauha 250 mg twice daily and Arogyavardhinivati 500 mg twice daily before	Moderate feeling of heaviness in the body, Moderate inability to do physical exercise

	food	
09-03-2024 to 3-04-2024	VidangadiLauha 250 mg twice daily and Arogyavardhinivati 500 mg twice daily before food	Moderate feeling of heaviness in the body, Moderate inability to do physical exercise
04-04-2024 to 25-04-2024	Vidangadi Lauha 250 mg twice daily and Arogyavardhinivati 500 mg twice daily before food	Mild feeling of heaviness in the body, Mild inability to do physical exercise
30-04-2024 to 16-05-2024	Arogyavardhini vati 500 mg twice daily before food and Arjun Churna 3 mg twice daily before food	Mild feeling of heaviness in the body, mild inability to do physical exercise
30-05-2024 to 20-06-2024	Vidangadi Lauha 250 mg twice daily before food and Arjun Churna 3 mg twice daily before food	Mild feeling of heaviness in the body, ability to do physical exercise
21-06-2024 to 10-07-2024	Vidangadi Lauha 250 mg twice daily before food and Arjun Churna 3 mg twice daily before food	no feeling of heaviness in the body, ability to do physical exercise

Table 2

S.no	Investigation	BT(mg/dl) on 22-02-2024	On 26-04-2024	19-07-2024
	FBS	103		-
	Urea	24	34	45
	Creatinine	1.7	1.7	2.9
	Uric Acid	8.9	8.6	4.1
	S. Bilirubin(Total)	0.3	0.5	0.6
	S. Bilirubin(Direct)	0.1	0.2	0.2
	S. Bilirubin(indirect)	0.2	0.3	0.4
	Alkaline Phosphate	107	86	77
	SGOT	28	23	19
	SGPT	39	27	15
	Total protein	7.2	7.1	7
	Albumin	4	4.1	4.2
	Globulin	3.2	3	2.8

A/G Ratio	1.2	1.3	1.5
S. Cholesterol	273	270	157
S. Triglycerides	656	448	157
S.LDL	79	128	78
S.VLDL	131	89	31
S.HDL	63	53	48

## DISCUSSION

### Probable Pharmacological Action

Dislipidemia is metabolic disorder which can be correlated with Medoroga. In medoroga mainly kapha dosha and medodhatu is involved. Kaphavardhak ahara vihara vitiate both kapha dosha and medodhatu. Due to increase of medadhatu movement of vata dosha is obstruct. Due to obstruction of vata dosha of kosta increases agni inside kosta. So digestive capacity increases and the person can consume more food. But due to vitiation of medodhatu medagni also vitiate. It cannot convert poshya dhatu for meda. And poshak amsa also vitiate due to vitiation of medagni. As a result abadha meda increases and leads medoroga (dyslipidemia). From the Samprapti, it is clear that the Chikitsa for Medoroga should be able to correct the Agni, pacify Kaphapradhanatridoshas and correct the medodhatu. Vidangadi lauha has Tikta and kashaya rasa, Laghu-and ruksha property, Sheeta veerya and Madhura vipaka mainly. In Medoroga mainly kapha dosha and medoroga vitiate so Tikta kashaya rasas and Laghu-rukshaguna is helpful to manage. Tikta-kashaya rasas acts as Kapha hara and Rukshana which corrects vitiated Meda. Jathargni is increased in medoroga which is compensated by the Madhura vipaka and Sheeta veerya. The ingredients which have Deepana-pachana properties helps to digest the avadha and vaddha meda. Some studies like Phytochemical and experimental study shows that vidangadilauha has hypolipidemic activity. Most of the drugs shows the result in lowering the bad cholesterol levels.<sup>7,8</sup>

*Arogyavardhini* gutika has deepan pachan property alongwith medohara. It has also malasudhikara property which helps to eliminate the excess mala of meda dhatu. There are many studies also which shows its dyslipidemic activity. <sup>9,10,11</sup>

Arjuna has kashaya rasa, ruksha property, Sheeta veerya and katu vipaka mainly. Kashaya rasas and Laghu-rukshaguna is helpful to manage medoroga due to opposite property of kapha. Jathargni is increased in medoroga which is compensated by Sheeta veerya. Katu vipaka helps to proper movement of vayu stagnant in kosta which vayu increases the jathargni. Some studies shows that Arjuna has hypolipidemic activity. Most of the drugs shows the result in lowering the TC, TG, LDL-C levels. <sup>12,13,14</sup>

## CONCLUSION

In Ayurvedic texts there is no direct reference is mentioned about dyslipidemia. It can be correlated with medoroga. There are many studies found that the drugs useful for medoroga reduce the bad cholesterol levels. In this case study it is also found that the dugs useful for medoroga along with lifestyles advice shows good result. And it can be used for further clinical studies.

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