



# “MANAGEMENT OF HYPERLIPIDEMIA THROUGH AYURVEDIC INTERVENTION”

Dr. Sonal A. Shah<sup>1</sup> Dr Mayur Pandit Salokhe.<sup>2</sup>

<sup>3</sup> Dr.Gunvant H. Yeola , Dr.Vishvjeet Shashikant Kumbhar<sup>4</sup>

<sup>1</sup>HOD And Professor at Loknete Rajarambapu Patil Ayurved Medical College PG Institute And Research Centre Islampur Sangli . Phd Student at Dr D.Y Patil College of Ayurved and Research Center, Dr DY Patil Vidyapeeth (Deemed To The University) Maharashtra, impri - Pune - 411018

<sup>2</sup> P.G Student Of Kayachikitsa Department, LRP Ayurvedic Medical College And P.G Institute Islampur, Sangli Maharashtra , India

<sup>3</sup>Dean and professor of D.Y patil college of Ayurved and research centre, Dr D.Y patil vidyapeeth ( deemed to university ) maharashtra , pimpri , pune - 411018

<sup>4</sup> Assistant Professor Department of Kaumarbhritya LRPAMC Islampur, sangali.

## Abstract :-

Hyperlipidemia is defined as elevated serum levels of cholesterol, triglycerides, or both. It is characterized by abnormally elevated lipid concentrations in blood caused by impaired lipid and lipoprotein metabolism and has the potential to cause a variety of complications such as cardiovascular disease, diabetes, obesity, hypertension, atherosclerosis, and so on. The difference in total serum cholesterol is 36 mg/dl, serum triglycerides is 32 mg/dl, serum LDL is 40 mg/dl, serum VLDL is 15 mg/dl and serum HDL is -3 mg/dl.

In Ayurveda Acharya Charak described Ashta Nindita Purusha and emphasized in detail about two pathological condition viz Atisthula and Atikarshya .Atisthulapurusha is worst among them , due to its complicated pathogenesis, variable complication and treatment. Obese peoples in community have complex form of diseases like hypertension, hyperlipidemia, DM

**Keywords:** Hyperlipidemia, Dyslipidemia, Medoroga.

## Introduction :-

In the present era of modernization and fast life, techniques have made people busy hence living stressful life. People are taking more junk and fatty foods, cold drinks, consumption of fast foods having high calories. Lipids are non-polar hydrophobic molecules that are needed by all living cells. They serve many important roles in the human body, including playing an important role in cellular structure, acting as concentrated sources of energy storage, metabolic regulators, shielding internal organs via a cushioning

effect, and so on. Both of these lipids are known as depot lipids because they are retained in the body, while others circulate in the blood. One such dietary condition, hyperlipidemia, has been mentioned as a potential risk factor for a number of illnesses, including cardiovascular disease, the metabolic syndrome, and even hypertension.

While there is no specific terminology for hyperlipidemia in the Ayurvedic classics, Rasagata Sneha Vriddhi, Rasa Raktagata Sneha Vriddhi, Medovriddhi, Medoroga or Medodosha, Ama Medo Dhatu use for the same. On the basis of its pathophysiology, hyperlipidemia is identical to Asthayi Medo Dhatu Vriddhi. Furthermore, since this unnecessarily elevated Asthayi Medo Dhatu is Ama in origin, it is stored in the body for a longer period of time, resulting in additional complications. The affected Kapha Dosha and Medo Dhatu are also found to play a key role in the pathogenesis of Atisthaulya and Prameha in Hyperlipidemia.

Medoroga is a condition brought about by a sporadic amassing of medodhatu. It is brought about by vitiated Kapha dosha from the beginning, and afterward Pitta and Vata dosha have an impact in its pathogenesis, causing side effects of their own. In later stages, pathological gatherings of abhaddha apachita medas in other srotus cause different side effects like Javoparodha, Ayushohrasa, Swedhsbhaada, etc. Avyayama, Adhyashana, Divasvapna, Ati madhura, Guru, Snigdha Ahara sevana, multiple Manasika Bhavas, and Beejadosha are some of the nidanas that patients do. The appearance of symptoms such as Swedadhikya, Atikshudha, Atipipasa, Daurgandhya, Daurbalya, Utsahahani, and others indicates the involvement of other doshas such as Pitta and Vata.

Aptarpana Chikitsa can be utilized with measures, for example, Ullekhana, Raktamokshana, Vyayama, Upavasa, Dhuma, Swedana, Sakshaudra Ahara, Abhayaprasha, Rukshanna Sevana, and different types of Churnas and Pradehas. Since Kapha Dosha and Medo Dhatu are the essential vitiated factors in the pathogenesis of Hyperlipidemia, Vishesh Chikitsa alludes to the test that prompts a lessening in the previous two. Since the treatment of two infections, Sthaulya and Prameha, intends to decrease superfluous Kapha Dosha and Medo Dhatu, these can likewise be viewed as a treatment choice for the Vriddha Asthayi Medo Dhatu.

Acharya Sushruta stated Shilajatu, Guggulu, Gomutra, Triphala, Loharaja, Rasanjana, Madhu, Yava, Kordusha, Shyamaka, Uddalaka, Virukshana and Chedaniya Dravyas, Vyayama and Lekhana Basti in Sthaulya chikitsa. Acharya listed various tasks, based on the patient's needs, for inducing optimum physical effort, such as workouts, chariot travel, and long-distance walking. Also recommended walking a distance of 100 Yojana and adhering to dietary restrictions.

#### **Major risk factors (Exclusive of LDL Cholesterol):**

- Hypertension (blood pressure above 140/90 mmHg or use of antihypertensive medication);
- Low HDL cholesterol (40 mg/dl);

- Smoking cigarettes;
- The age (men 45 years; women 55 years). Initiate therapeutic lifestyle changes if LDL is above goal:
- Increased physical exercise.
- Therapeutic dietary and lifestyle Diet plan;
- Premature CHD in the family (CHD in male first degree relative 55 years; CHD in female first degree relative 65 years);
- Consider increasing viscous (soluble) fiber (10- 25 g/day) and plant stanols/sterols (2 g/day) as therapeutic alternatives to boost LDL lowering; Weight loss;

### Subjective Parameters:

#### Chalatva of udara

- Absence of chalatva – 0;
- Presence of chalatva – 1.

#### Chalatva of sthana

- Chalatva of breasts – absent – 0;
- Chalatva of breasts-present – 1.

#### Chalatva of Sphik

- Absence of chalatva – 0;
- Presence of chalatva – 1.

#### Alasya

- Doing work satisfactorily with proper vigor in time – 0;
- Doing work satisfactorily with late initiation – 1;
- Doing work unsatisfactorily under mental strain and taking time – 2;
- Not beginning any work on his own obligation and doing little work – 3;
- Refuses to take the initiative and not want to function even after pressure – 4.

#### Krichra Vyavaya

- Unimpaired libido and sexual performance – 0;
- Decreased libido but ability to conduct sexual act – 1;
- Decreased libido but ability to perform sexual act with difficult – 2;
- Loss of libido and inability to perform sexual act – 3;



### Daugandhya

- Absence of bad odour – 0;
- Occasional bad smell from the body that is removed after Bathing – 1;
- Persistent bad smell restricted to near places that is impossible to mask by deodorant – 2;
- Persistent bad smell sensed from long distance that is not suppressed by deodorant – 3;
- Persistent bad smell felt from long distance that is also intolerable to the patient himself – 4.

### Daurbalya

- Can do regular exercise – 0;
- Can do moderate exercise without trouble – 1;
- Can only perform mild exercise – 2;
- Can do mild exercise with very difficult – 3;
- Cannot do even mild exercise – 4.

### Kshudatimaatram

- Normal hunger – 0;
- Excessive hunger – 1.

### Pipasa

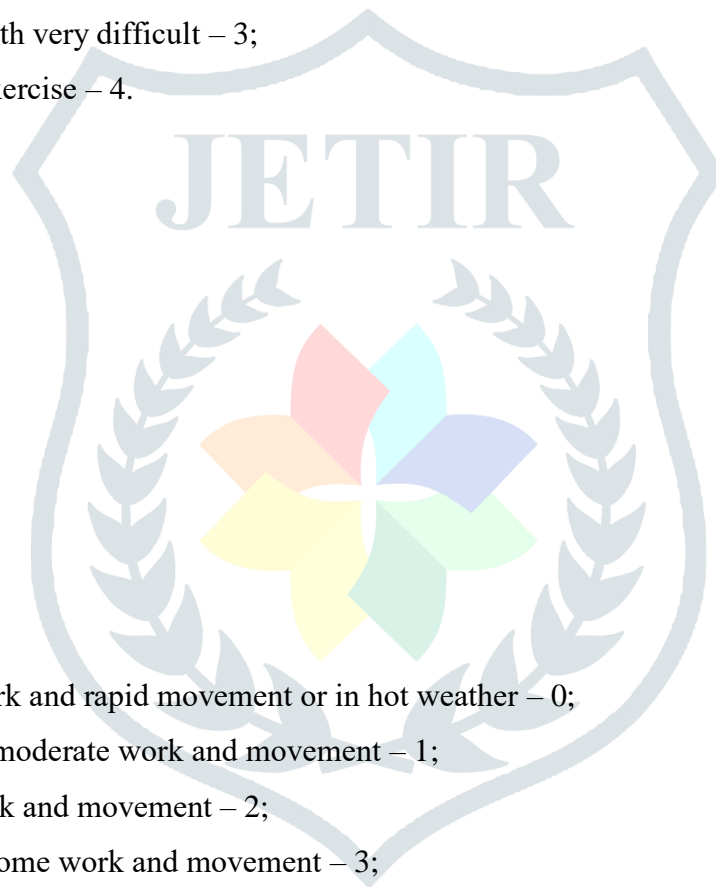
- Normal thirst – 0;
- Excessive thirst – 1.

### Svedhaabaada

- Sweating after hard work and rapid movement or in hot weather – 0;
- Profuse sweating after moderate work and movement – 1;
- Sweating after little work and movement – 2;
- Profuse sweating after some work and movement – 3;
- Sweating even at rest or in cold weather – 4.

### Major risk factors (Exclusive of LDL Cholesterol):

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- Weight loss;
- Increased physical exercise.

In 2000 the AHA revised its guidelines, which place emphasis on foods rather than nutrients and added weight management as a goal. The AHA guidelines include:

- 30% of calories come from overall fat consumption.
- 10% of calories should come from saturated fat.
- 300 mg of dietary cholesterol per day
- Two servings of cold-water fish rich in omega-3 fattyacids per week.
- Eat more fruits and vegetables, as well as low-fat andfat-free dairy products.
- Replace saturated fat with whole grains, fruits, fish,legumes, and nuts.
- Limit the salt intake to 6 grams a day.
- Limit alcohol consumption to two drinks a day for menand one drink a day for women.
- Keep a balanced body weight.
- Increase your physical exercise level.

Total Cholesterol Level:

- Desirable – <200 mg/dl;
- Borderline high – 200-239 mg/dl;
- High –  $\geq$ 240 mg/dl.

LDL Cholesterol Level:

- Optimal – <100 mg/dl;
- Above optimal – 100-129 mg/dl;
- Borderline high – 100-159 mg/dl;
- High – 160-189 mg/dl;
- Very high –  $\geq$ 190 mg/dl.

HDL Level:

- Low – <40 mg/dl;
- High –  $\geq$ 60 mg/dl

## Serum Triglycerides:

- Normal – < 150 mg/dl;
- Borderline High- 150-199 mg/dl
- High – 200-499 mg/dl;
- Very High –  $\geq 500$  mg/dl.

## Elevated Lipid Profile:

- Serum Cholesterol – >200 mg/dl;
- Serum LDL – >160 mg/dl;
- Serum VLDL – >70 mg/dl;
- Serum Triglycerides – >170 mg/dl;
- Serum HDL – 45-70 mg/dl

## Subjective Parameters:

## 1. Chalatra of udara

- Absence of chalatra – 0;
- Presence of chalatra – 1.

## 2. Chalatra of sthana

- Chalatra of breasts – absent – 0;
- Chalatra of breasts-present – 1.

## 3. Chalatra of Spik

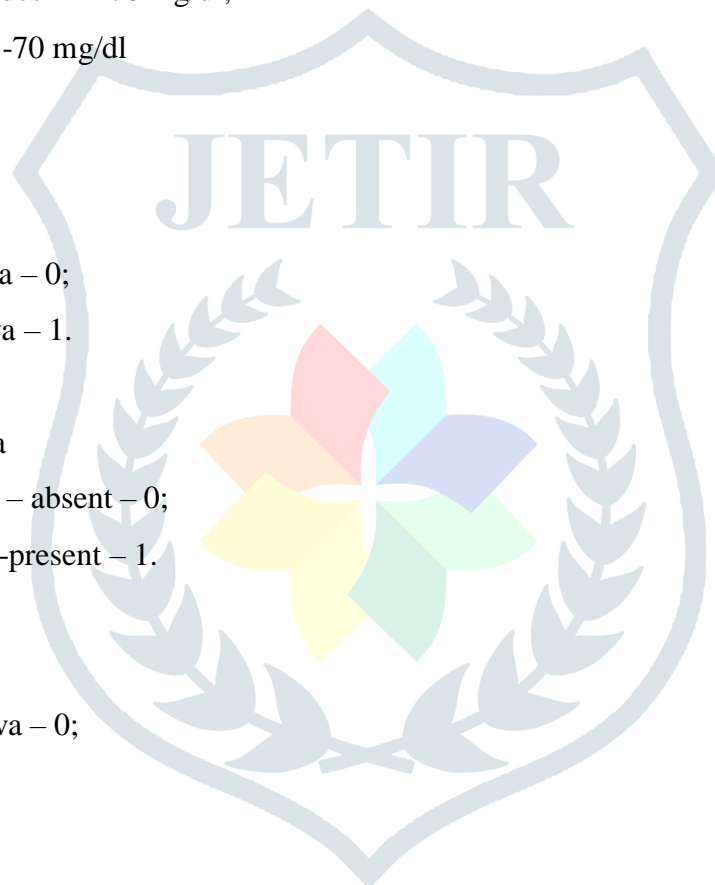
- Absence of chalatra – 0;

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## 8. Kshudatimaatram

- Normal hunger – 0;
- Excessive hunger – 1.

## 9. Pipasaatiyoga

- Normal thirst – 0
- Excessive thirst – 1.

## 10. Swedhabadh -

sweating after hard work and rapid movement or in hot weather – 0;

- Profuse sweating after moderate work and movement – 1;
- Sweating after little work and movement – 2;
- Profuse sweating after some work and movement – 3;
- Sweating even at rest or in cold weather – 4:

## I. CASE STUDY

On 18.06.2023, a 52-year-old non-hypertensive, non-diabetic female patient presented to the OPD with chief complaints of complete, difficulty in losing weight, abdominal obesity flaccidity, pendulous belly, buttocks, breasts, weakness, fatigue, oversleeping, lethargy, tiredness, dyspnea on exertion, lack of sexual desire, foul body odour, profuse sweating, polyphagia, excessive thirst for last one year. Her weight has

started to rise over the last 5 years, and she is presently at the highest weight she has ever been. Patient notes that any time observe clear diet and cut back on eating. The patient complains that the pain in her legs makes every exercise impossible. The patient's initial history showed that he had experienced sudden fatigue and general debility and had been receiving home medication for three months. Cholesterol, Triglycerides, and other parameters were shown to be elevated in the lipid profile. On assessment, the patient was afebrile, awake, and well-oriented, listening to verbal orders while experiencing fatigue when walking and standing for long periods of time.

- Time of Onset: Adult, last 1.5 year;
- Type of Onset: Gradual;
- Course: Progressive;
- Aggravating Factors: Eating & Sedentary habit.

Past History - Non contributory

Personal History:

- Ahara: Samishra;
- Dietary Habits: Vishamasana;
- Dominant Rasa: Madhura;
- Kostha: Madhyama;
- Bowel (Stool): Irregular, mild constipation;
- Consistency: Hard;
- Micturation: Scanty;
- Frequency: 4-5 times/24 h;
- Snana: Daily & Regular;
- Exercise: Irregular & Occasional;
- Physical Activity: Household work
- Type of work: Sitting & Sedentary physical work;
- Hours of work: 2-3 hours/day;
- Supplementary Diets: Tea;
- Sleep: Disturbed Day 1-2/hrs. Night 6/h;
- Swapna: Yes;
- Addiction: Tranquilizers & Others - syrup Corex;
- Perspiration: Bahula;
- Emotional Makeup: Tension.

Menstrual history - Age of menarche 13 year - M. C. 3-4 days, Irregular, Menopause at 48 years.

Obstetric history - Multipara, Drug induced abortion twice.

Previous history of taking birth control pills.

General examination:



- Height: 154 cm;
- Weight: 90 kg;
- BP: 130/90 mm/Hg;
- Pulse: 88/min;
- Temperature: 98.06F;

Respiratory rate: 22/min.

### Treatment Schedule:

1. Shri Gopal Taila: Til Taila, Shatavar, recemosus, Kushmanda Amalak. Ashwagandha, Sahachara, Bala, Bilva, Shayonaka, Gambhari, Patala, Agnimantha, Katakari, Murva, Ketaki, Karanja, Paribhadra, Ashwagandha, Choraka, Padmaka, Katakari, Bala, Musta, Turushaka, Shwet Chandana, Amalald, Haritaki, Bibhitaka, Jivaka, Rishbhaka, Meda, Mahameda, Kakoli, Kshira Kakoli, Mudgaparni, Mashaparni, Jivati, Yashtimadhu, Shunthi, Maricha, Pippali, Kumkuma, Nagakesara, Tvak, Tvakapatra, Shaileya, Vyagranakha, Kamala, Utpala, Ushira, Jatamanas, Devadaru, Vacha, Dadima, Tejovati, Riddhi, Vriddhi, Damanaka, Sukshma, Musta, Agar, Khattasi, Rakta Chandana, Kasturi. (For L.A 10 ml, BD For 1 Month.(Dabur India PVT limited)

2. Tb. Lipocare :

Kashay - Vibheethaki, Haritaki, Dhathri

Swarasa - Kaidarya, Lasuna

Powder – Pippali, Pippalimoola, Chitraka. Nagara, Chavika 750 mg, 2 BD, Medu Pachak Vati For 1 Month.

3. Medopachak Vati :

Chirayta, Guduchi, Raktachandan, Shunthi 250 Mg 2 BD For 30 Days ( Oushadhi pharmaceuticals)

4. Panchasam churna – Shunthi, Pippali, Haritaki, Nishottar, Saindhava, 3 gm BD, For 1 Month. ( pandit sharangdhar aacharya virachita sharangdhar samhita shlok 95/96)

5. Vardhamana Pippali Rasayana – Pippali. 5 gm

(Combination Of Kwath, Churna, & Kalk )

Increase 1 gm Daily For 15 Days. & Decrease 1 gm Daily

For 15 Days. Dose = 30 Days. (Kayachikitsa, Vaidya. yashwant Govind joshi, navi sudharit avrutti 2010 Rasayan adhyay)

6. Arjunarishtha – Arjuna, Madhuka, Draksha, Dhataki, Jaggery 10 ml BD For 1 month. (Baidyanath pharmaceuticals )

**RESULT****TABLE I: FUNCTIONAL ASSESSMENT**

Parameter	Before Treatment	After Treatment
Height	154 cm	154 cm
Weight	90 Kgs	85 Kgs
BMI	37.95 Kg/m <sup>2</sup>	35.84 Kg/m <sup>2</sup>

**TABLE II: PATHOLOGICAL INVESTIGATION**

Lipid Profile	Before Treatment	After Treatment
Serum Cholesterol	248 mg/dl	212 mg/dl
Serum Triglycerides	178 mg/dl	146 mg/dl
Serum LDL	184 mg/dl	144 mg/dl
Serum VLDL	72 mg/dl	57 mg/dl
Serum HDL	49 mg/dl	52 mg/dl

**TABLE III: SUBJECTIVE PARAMETER**

Parameter	Before Treatment	After Treatment
Chala Udara	1	1
Chala Sthana	1	1
Chala Sphik	1	1
Alasya	3	1
Krichra vyavaaya	2	2
Daurgandhya	3	1
Daurbalya	3	2
Kshudhatimatra	1	0
Pipasa	1	0
Swedhabaada	3	2

## DISCUSSION

Hyperlipidemia is a condition of lipoprotein synthesis that can result in excess or lack of lipoproteins.

Hyperlipidemia can be characterised by elevated total cholesterol, LDL cholesterol, and triglyceride levels, as well as a reduction throughout HDL cholesterol levels in the blood. It is relatively discreet in terms of what the patient can detect on his or her own, making it a silent murderer. Hyperlipidemia is characterized as an elevated amount of lipids and lipoproteins in the blood, which can be linked to an increase in Medas in the body and is linked to Medo Roga in Ayurveda.

The result obtained regarding the parameter of lipid profile showed marked improvement. The difference in total serum cholesterol is 36 mg/dl, serum triglycerides is 32 mg/dl, serum LDL is 40 mg/dl, serum VLDL is 15 mg/dl and serum HDL is -3 mg/dl. For an Ayurvedic drug to act on elevated lipid levels it should have the following effects:

It should perform Amapachana and Shodhana at the Rasa Dhatu stage, since Rasa is the primary nutritive pool from which Rakta, Mamsa, Meda, and other Dhatus obtain nutrients.

- After traversing the Rasadi Dhatus, it can cross the stage of Medo Dhatu.
- It should correct the pathology that has resulted in an excess of Medo Dhatu by encouraging the Jatharagni.
- It should do Lekhana and Upshoshana of the excess Kapha, Mamsa, Meda, Vasa, Kleda, and Sweda.

As seen from the Ayurvedic prism, hyperlipidemia Since bahu abaddha medas circulates in the body, it can be taken as Medo roga or Medo dosha. Medo vilayana may be caused by Tikta katu, Kashaya rasa, and ushna Virya.

shri gopal tail, Lipocare, Medopachak Vati, Panchasama Churna Arjunaarisghtha, And Tb. Lipocare are rooksha, teekshna, and ushna in nature, which allows them to penetrate deeper channels and remove sanga or obstruction. In nature, these medications are also ushna. In the case of hyperlipidemia, the obstruction can be seen as atherosclerosis, which is caused by fat accumulation in the arteries. As a result of the above properties, it aids in the liquefaction of these fatty blockages. The majority of drugs include tikta-katu rasa along with laghu, rooksha, and tikshana guna, which aids in Sneha-Meda-Kleda soshana. Both medicines have a Katu Vipaka essence, which allows them to penetrate deeper channels and correct the Medodhatu. The Sneha-Meda-Kleda soshana is performed by Katu Rasa and Katu Vipaka. Chitraka is rich in lekha, which aids in sroto sodhana and kapha medo vilayana. All drugs have medohara properties, and the rest of drugs have lekha, rooksha, and teekshna properties. Deepana Pachana quality Ushna Veerya and Katu Rasa aid in the enhancement of agni, which results in Amapachana and the reduction of kleda in the body (kledasoshana). Plaque forming can be avoided in this manner. Medodhatwagni's work is restored,

and the sookshma and stoola kitta bhavas are properly created. Deepana medicines are used to isolate the dhatuleena doshas from the dhatus. The undigested portions are digested by pachana medications. These medicines include teekshna guna as well as lekshana. Property is essential in Kaphamedo vikaras lekshana for relieving srotorodha. Deepana, pachana, and rochana gunas modulate metabolism at the dhatu stage, as do agni deepana, amapachana, sroto shodana, and snehakleda-medo vishoshana. Arjunaarishtaka is also hrudya & balya Which gives strength to heart & Body.

## CONCLUSION

The current case study demonstrates the role of Ayurvedic therapy in the treatment of hyperlipidemia. In Ayurvedic literature, hyperlipidemia is explained in bits and pieces under the general umbrella of Medoroga. Food, according to Ayurveda, is one of the primary causes of all diseases. This is mostly attributed to Mandagni's effect on inappropriate food digestion. Laghu, Rooksha gunas, Thikta Rasa, KatuVipaka, Deepana, Paachana, Kaphapittha Shamaka, Raktha-shodhaka, Hridya, and Lekshana would be perfect for controlling lipid levels in the bloodstream. The results obtained for the lipid profile parameter demonstrated a significant change. While this case study was conducted with a single patient over a short period of time, the mass study with a broad statistical approach is necessary for further evaluation.

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