

Ayurveda Treatment protocol in Medoroga w.s.r to Hypercholesterolemia- A Case Study

Meenakshi Verma^{1*}, Anuruddh Gupta²

¹Assistant Professor, Department of Kayachikitsa, ²Assistant Professor, Department of Shalya Tantra, Rama Ayurvedic Medical College and Hospital, Rama University Kanpur U.P. India.

ABSTRACT:

The prevalence of Hypercholesterolemia is 79% in Indian population. Hypercholesterolemia is one of the major modifiable risk factors for cardiovascular diseases, pancreatitis, fatty liver and many other diseases. According to *Ayurveda* Hypercholesterolemia is the corresponding output of *Medovaha Srotodushti* (micro channel disturbances). *Indian Privarjan* (elimination of causes) and advice of specific *Pathya* measures are useful in the management of Hypercholesterolemia. In present case we applied the principle of *Medovaha Srotodushti Chikitsa (Aptarpana Chikitsa)* for Hypercholesterolemia. The lipid lowering therapy in modern medicine including statin and fibrate is well tolerated with less side effects (2%). In this context Ayurveda provides cost effective therapy for Hypercholesterolemia without any side effects. The authors tried to share their experiences through this case study to state that given Ayurvedic management and along with specific *Pathya Ahara-Vihara* are effective in the management of Hypercholesterolemia. As a single case is not enough to prove the efficacy, the further extended research is recommended.

KEYWORDS: Hypercholesterolemia, *Nidan Privarjan*, *Medovaha Srotodushti*, *Pathya*.

Received: 20.01.2023 Revised: 28.02.2023 Accepted: 08.03.2023 Published: 20.03.2023

Quick Response code



*Corresponding Author:

Dr. Meenakshi Verma

Assistant Professor, Department of Kayachikitsa,
Rama Ayurvedic Medical College and Hospital, Rama
University Kanpur U.P India.

E-mail : meenvermabams@gmail.com

INTRODUCTION:

Dyslipidemia is a disorder of disturbed lipid metabolism involving abnormality in any or all of the lipoproteins in blood. According to ICMR-INDIAB study, the prevalence of Hypercholesterolemia was 13.9%, of Hypertriglyceridaemia was 29.5%, of low HDL-C was 72.3%, and of high LDL-C levels was 11.8%. The metabolic consequences associated with changes in diet and lifestyle is responsible for increased number of hyperlipidemia individuals. Lipoproteins are complex lipids that are essential for

transport of cholesterol, triglycerides and fat soluble vitamins. The level of LDL cholesterol is most directly associated with coronary heart disease while VLDL shows association with premature atherosclerosis. The ratio between Total Cholesterol: HDL<3.5 has been recommended as clinical goal for prevention of CHD. Coronary Heart Diseases contribute 25-30% of deaths in most of industrial countries and originated by several risk factors, out of them Dyslipidemia is most important. Clinical manifestations of hyperlipidemia are

xanthelasma, corneal arcus, prepatellar xanthomas but most of the time Dyslipidemia may remain hidden clinically. In large number of cases the hyperlipidemia may be diagnosed when lipid profile of the patients have been done who are associated with risk factors, or on random basis.

Causes of Secondary Hypertriglyceridaemia includes few disease like Diabetes mellitus (type 2), Chronic renal disease, Abdominal obesity, Excess alcohol intake Hepatocellular disease.

Causes of Secondary hypercholesterolaemia includes few disease like Hypothyroidism, Nephrotic syndrome, Pregnancy, Anorexia nervosa, Cholestatic liver disease, Hyperparathyroidism, Drugs (diuretics, corticosteroids).

Concept of Cholesterol in Ayurveda:

Meda is defined as the one which performs the function of *Snehana*. It is a specific type of *Dhatu* originated from *Mamsa Dhatui*. The *Sthana* of *Medo Dhatu* is *Vapavahan* and the site of accumulation of *Meda Dhatu* in abdominal cavity, which is also known as *Tailavartika*. In Other Word *Vasa* are the fat content of the *Mamsa Dhatu* and that are qualitatively similar to *Medodhatu* so that it is understood that Compositions of *Medo Dhatu* are *Prithvi* and *Apa Malabutas*. So *Medo Dhatu* is *Atisnigdha*, *Guru*, *Picchila*, *Mridu*, *Sandra* and *Shweta*. The total quantity of *Medo Dhatu* is 2 *Anjali* and that of *Vasa* is 3 *Anjali*.

According to Ayurveda a person following *Apathya* like *Avyayama*, *Achinta*, *Diwaswapna* *Atisnigdha*, *Madhura*, *Adhyashan*, and *Atimatra Ahara* in diet and *Beeja swabhavaj* leads to *Medovaha Srotodushti*.^[1] In due course of time blockage of *Medovaha Srotasa* propagates defective tissue metabolism which leads to *Medoroga* and its associated disorders like *Sthaulya*, *Premeha*, and *Kustha*, disorders of *Ama*, *Napunsakata*, and *Dysuria*.^[2]

The management of *Medorog* with modern drugs is quite unsatisfactory as most of the modern drugs employed in the treatment of the *Medorog* possess serious side and toxic effects therefore in this case study decided to advise Ayurvedic medicine in the form of tablets, kwatha etc. Which are *Ruksha Tikshana* in nature which is found to be effective in the reduction of body weight & other associated complaints of *Medoroga*.

CASE STUDY:

A Patient 38 years old male patient resident of Naramau, Kanpur, Uttar Pradesh came in OPD of *Kayachikitsa Rama Ayurvedic Hospital Mandhana Kanpur Rama University* with the complaints of gaining of weight, pain in legs, skin colour changes, Irritation and Weakness (OPD no. KC 30807/2022).

Physical Examination and Initial Investigations

- Blood Pressure -130/90 mmHg
- Heart Rate -76/min Height -164 cm Weight -83 kg
- BMI -31.1

Laboratory Evaluation:

(A) Fasting Lipid Profile Total

- Cholesterol Level -264.5 mg/dL
- Triglycerides -290 mg/dL
- Very Low Density Lipoprotein (VLDL)-58.18 mg/dL
- Low Density Lipoprotein (LDL) -159 mg/dL
- High Density Lipoprotein (HDL)-46.9 mg/dL

(B) Thyroid Profile Test

TSH (Ultrasensitive) – 5.64 ng/dl
T3 (Triiodothyronine) - 116 ug/dl
T4 (Thyroxine) – 7.23 uIU/ml

Clinical Features:

Patient was complaining increasing of weight, stretching type of pain in both legs and lethargic since 3 months. Patients was also suffering from hypothyroidism and taking medicine Thyronorm 25mcg since 1 year. Before 1 year patient was asymptomatic so that he get done lipid profile test as advised by his doctor and found increased value of cholesterol and increased blood pressure which was persistent so that he received modern medicine of Stating group foe hypercholesterolemia and Amlodipine 5 mg for high blood pressure for as prescribed by modern physician since last two months but no significant improvement was observed by the patient. So that patient with same complaints attended Kayachikitsa OPD for Ayurvedic management in Rama Ayurvedic Hospital, Rama University Mandhana Kanpur.

In past History , patient had no history of diabetes and smoking but patient was suffering from hypothyroidism and hypercholesterolemia since 2-3 years. There is no history any surgical procedure. In personal history, Bowel- Irregular some time constipation, Urine- Normal, Appetite- Decreased , Sleep-Normal, Thirst-Normal , Addiction- Alcohol. The assessment of relief was done on the basis of subjective and objective parameters (Table-4,5).

Dietary regimens:

We have thoroughly examined the case and given following Ayurvedic management for

keeping in views that: "Dietary modification is an important component in the management of Dyslipidemia". [3]

- Specific Pathya Chapatti made up of flour containing 5 ingredients (*green mudga, yava, chanaka, gehu, sawa chawal*). [4]
- General Pathya Ahara-Vihara/ life style measures
 - Intake of food at the time of hunger (in 3 divided doses).
 - Use of green vegetables, *takra* and *lashun* in their diet. [5]
 - Minimum 5 min walking after every meal.
 - Strict advice for importance of *vyayama* on every visit and encourage for daily cycling 30 minutes. [5]
- 3-Apathya/avoidable life style measures
 - Excessive oily fried items, high sugar containing items
 - Non-vegetarian diet.
 - Sleeping during day time.

OBSERVATIONS AND RESULTS:

Patient taken specific *Pathya (chapatti* of multigrain flour) and followed lifestyle modification regularly for three months along with internal medicines. 2 Follow-ups were done at every one month of interval. At every follow-up lipid profile, clinical Symptoms, signs and other investigations were evaluated.

Table-1: Prescribed Drug History:

Drugs	Doses	Anupana	Kala	Since
Tab Atorvastatin	1 BD	Lukewarm water	After food	1 month
Tab Amlodipin	1 BD	Lukewarm water	After food	1 month
Tab thyronorm	1 OD	Lukewarm water	Empty stomach	1 year

Table-2: Therapeutic Intervention:

Drugs	Doses	Anupana	Kala	Days
Tab Aarogyavardhini vati	2 TID	Lukewarm water	After food	1 month
Tab Kanchanar guggul	2TID	Lukewarm water	After food	1 month
Tab Medohar guggul	2TID	Lukewarm water	After food	1 month
Cap Spacol	2TID	Lukewarm water	After food	1 month
TFN- 34	2 TID	Lukewarm water	After food	1 month
Phaltrikadi kwath 10gm+ Dashamool kwath 10 gm	30 ml BD	Lukewarm water	Before food	1 month

Table- 3: Subjective parameters:

Symptoms	Grading
Alasy/UtsahaHani	
No alasya (doing work satisfactorily with proper vigor in time)	Grade 0
Doing work satisfactorily with late initiation	Grade 1
Doing work unsatisfactorily under mental pressure and takes time	Grade 2
Not starting work on his responsibility and doing little work very slowly	Grade 3
Does not take any initiation not want to work even after pressure	Grade 4
Atikshuda	
Normal appetite 2-3 times daily	Grade 0
Excess appetite 2-3 times daily	Grade 1
3-4 times daily	Grade 2
4-5 times daily	Grade 3
More than 5times daily	Grade 4
Atipipasa	
Normal thirst	Grade 0
Upto 1liter excess intake of water	Grade 1
1to 2 liter excess intake of water	Grade 2
2-3 liter excess intake of wate	Grade 3
More than 3liter intake of water	Grade 4
Dourbalya	
Can do routine exercise	Grade 0
Can do moderate exercise without difficulty	Grade 1
Can do only mild exercise	Grade 2
Can do mild exercise very difficulty	Grade 3
Cannot do even mild exercise	Grade 4

Table-4 Clinical Evaluation on grading of symptoms:

Visit Symptoms	Before Treatment	After Treatment
Alasy/UtsahaHani	Grade 2	Grade 0
Atikshuda	Grade 3	Grade 0
Atipipasa	Grade 3	Grade 0
Dourbalya	Grade 2	Grade 0

Table-5 Assessment of Lipid Profile

Tests	Day 1 st (July)	FU After 1 month (August)	FU After 1 month (September)
Cholesterol Level	264.5	255.5	189.7
Triglycerides	290.9	225.9	202.5
Very Low Density Lipoprotein (VLDL)	58.18	3.65	40.5
HDL	46.9	47.1	48.2
Low Density Lipoprotein (LDL)	159.42	125.5	101
CHOL/HDL	5.64	4.55	3.94
LDL/HDL	3.4	2.5	2.1
T3	116.2	116.9	116
T4	7.23	7.24	7.35
TSH	6.84	6.68	6.57

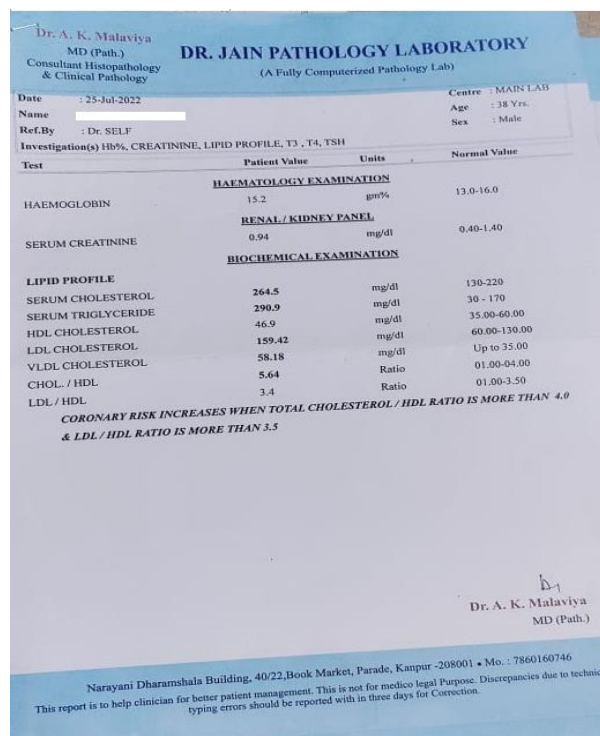


Fig-1: Lipid profile Before Treatment

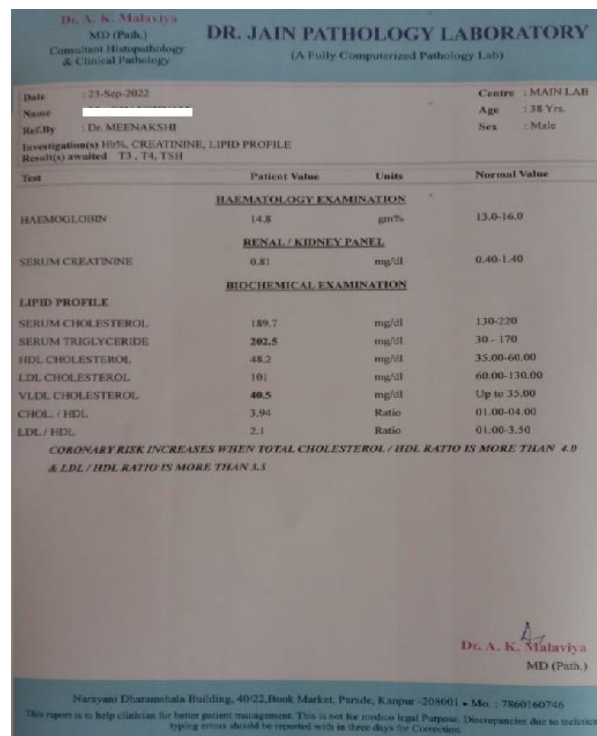


Fig-2: Lipid profile after Treatment

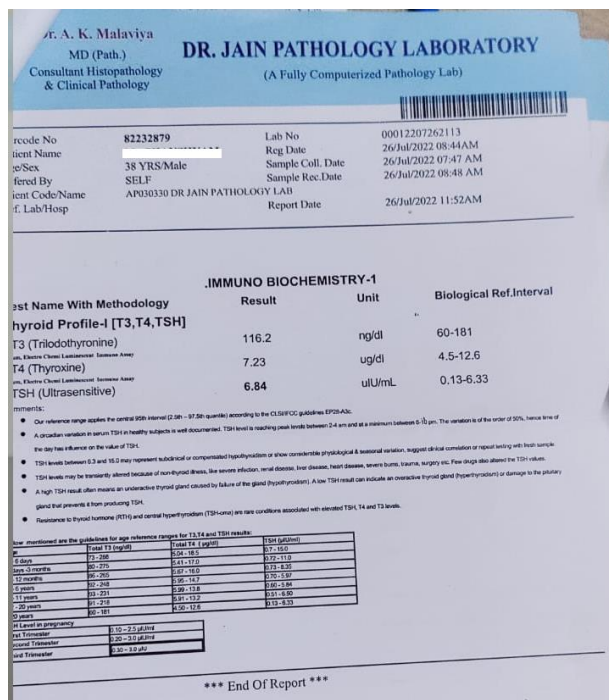


Fig-3: Thyroid profile Before Treatment

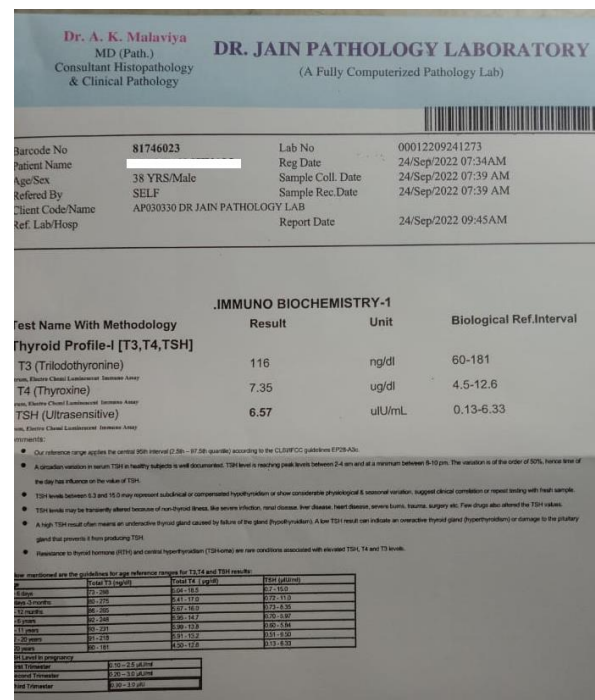


Fig-4: Thyroid profile after Treatment

DISCUSSION:

In the pathogenesis of dyslipidemia the hypo functioning of *medodhatvagni* play key role in the basic matrix of *medovaha-srotodushti* along with vitiation of *khapa dosha*. The Ahara and Vihara guidelines used here in the management of *Medovaha Srotodushti* have property of reducing the *kapha* and excess *medodhatu*. *Khapa dosha* triggers the derangement of lipid components in various manners and obstruct the body channels. The management of dyslipidemia in modern medicine is not satisfactory because of prolong use of modern drugs & their side effects; hence researchers are inclined towards alternative medicine. In this regard variety of drug and non pharmacological measures are described in Ayurvedic texts. In Ayurveda *Ahara-Vihara* are considered as a part of therapeutic as well as *Pathya* measures during treatment. During the management of dyslipidemia *kapha-medohara* treatment as well as dietary measure along with promotion of

jatharagni should be considered on priority basis. The *Ahara Vihara* guidelines used here in the management of *Medovaha Srotodushti* have property of reducing the *kapha dosha* and rearrangement of Meda and prevention of further vitiation of *kapha dosha* & *medodhatu*. We advised follow *vyayama* in the form of cycling.

The mixture of crude food items contains barley (*Hordeum vulgare*), wheat (*Triticum aestivum*), *green moong* (*Vigna radiate*), *chana* (*Cicer arietinum*), *sava ka chawal* (a variety of rice)= *Echinochloa frumentacea*. Flour of these five contents in equal quantity was made by milling and chapattis were prepared. This and this Flour has property of *tridosha shamana* and reduces the *kaphameda* because of *ruksha, kashaya,laghu* and *virukhshana guna*. The possible mechanism of action of this *Pathya* is to check the intestinal cholesterol absorption and also normalization of hepatic synthesis of endogenous lipoprotein formation.

Mode of action of trial drugs:

Arogyavardhini Vati improves digestive fire, clears body channels for the nutrients to reach to tissues for balances fats in the body and removes toxins. [5] *Arogyavardhini Vati* is effective to reduce symptoms, BMI and Sr. Cholesterol in Medoroga it is also effective to reduce symptoms, BMI and Sr. Cholesterol in Medoroga.

Kanchanar guggulu is having *Dipana*, *Pachana*, and *Lekhana* properties. It alleviates both *Vata* and *Kapha* and regulates the *Agni*. The research data suggests that *Guggul* corrects structure and function of the thyroid significantly after melatonin induced hypothyroidism and directly stimulates thyroid function probably through some enzymatic mechanisms.

Medohar guggul mainly contains drugs like *Sunthi*, *Pippali*, *Marich*, *Chitraka*, *Haritaki*, *Vibhitaki*, *Amalaki*, *Musta*, *Vaividanga* and *Shuddha Guggulu* having highest concentration of *Guggulu* in the combination. Almost all the drugs are having *Katu rasa*, *laghu ruksha guna*, *Ushnaveerya*, *Katuvipaka* and *KaphaVata Shamaka* properties which may be helpful in disintegrating the *Samprapati* of *Medoroga*. It is also having properties of *Deepana* (enlighten the *Agni*), *Paachana* (enhances digestive power), *Kleda-Meda Shoshaka* (scrap out excessive *Meda* and *Kapha*), *Srotovishodhaka* (open the micro channels) and potent in *Lekhana* property. So, by all these properties it also helps in scrapping of excessive *Meda* and *Kapha* and helps in breakage of pathogenesis of Disease. *Guggulsterone* is the bioactive constituent of *Guggulu* a key transcriptional regulator for the maintenance of cholesterol and bile acid homeostasis in body system. It removes excess cholesterol from body by converting in to bile acid through enterohepatic circulation and this is major pathway to remove excessive cholesterol

from the body. On assessing the ingredients of *Lekhaniya Mahakashaya* (*Musta*, *Kustha*, *Haridra*, *Daruharidra*, *Vaca*, *Ativisa*, *Katuohini*, *Chitraka*, *Chirbilva*, *Haimavati*), it is found that the drugs like *Chitraka* contains β sitosterol which act as Hypolipidemic. Saponins are also found in drugs like *Vacha*, *Haimvati* etc which is well known for lowering lipids. The combination showed highly significant results on subjective parameters like *Ashaktaha Sarvakarmashu*, *Kshudraswasa*, *Atinidra*, *Atisweda* etc. which is due to excess of *Meda* and *Kapha*. The combination act by its properties like *Lekhana*, *Karshana*, *usna*, *tikshana*, *Medohara Kaphahara* etc. and gives relief in the symptoms. The result is highly significant on Objective parameters also. This is because of internationally accepted effect of *Guggulipids*, β -sitosterol and saponins on lipid levels.

Phaltrikadi kasaya is *Tridosahar*, especially *Pitta Shamak*, due to *Amla Ras* it pacifies *Vata*, due to *Madhura* and *Sheeta* it pacifies *Pitta*, due to *Ruksha* and *Kashaya* it pacifies *Kapha*. *Aruchi*, *Agnimandya*, *Vibandha*, *Yakridvikara*, *Amlapitta*, *Udara Roga*, *Hridroga*, *Rakta Pitta*, *Jeerna Jwara*, *Dourbalya*, *Kshaya*, *Shotha* etc.

CONCLUSION:

Finally it concluded that Ayurvedic medicine along with strict *Pathya-Apathya* measures exert beneficial effect as normalization of deranged lipid profile, body weight, BMI. The clinical symptoms subsided and unwanted effects were not observed at the end of therapy. Thus, we can say that selected measures are safe & cost effective and may be helpful to the patients of Obesity, Diabetes, Hypertension, CHD, Metabolic Syndrome etc. These are easy natural methods for control and prevention of Hypercholesterolemia thereby reducing the risk of CHD and other diseases to enhance the life expectancy.

REFERENCES:

1. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi. Chaukhambha Sanskrita Sansthan, Varanasi.
2. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi.23/5-7, p 437. Chaukhambha Sanskrita Sansthan, Varanasi.
3. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi.21/25-27, page 415. Chaukhambha Sanskrita Sansthan, Varanasi.
4. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi. 21/25-28, page 415. b- Ibid 21/25-28, p415. Chaukhambha Sanskrita Sansthan, Varanasi.
5. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi. 23/5-7, p 437. Chaukhambha Sanskrita Sansthan, Varanasi.
6. Agnivesha, Charaka Samhita-Sutrasthana 21/21, page 415, by Kashinath Shastri & Gorakhnath Chaturvedi.21/25-28, page 415. b- Ibid 21/25-28, p415. Chaukhambha Sanskrita Sansthan, Varanasi.
7. Arogyavardhini Vati Benefits, Uses, Dosage & Side Effects, [Home page on internet]. Downloaded on 12/09/2016. Available at <https://www.ayurtimes.com> [Last accessed on Oct 23 2022].

CONFLICT OF INTEREST: Author declares that there is no conflict of interest.

GUARANTOR: Corresponding author is guarantor of this article and its contents.

SOURCE OF SUPPORT: None

HOW TO CITE THIS ARTICLE:

Verma M, Gupta A. Ayurveda Treatment protocol in Medoroga w.s.r to Hypercholesterolemia- A Case Study. J. AYUSH CaRe. 2023;7(1): 8-15.