American Journal of Psychiatric Rehabilitation

Research Article

Evidence-Based Ayurvedic Management of Dyslipidemia : Case Study

Dr. Anjali Bandiwar [1], Dr.Pooja Sahu[2*], Dr.Neelam Dhote[3], Dr.Anju VR[4]

[1]Assistant Professor, Department of Agadtantra, OM Ayurvedic Medical College & Hospital, Bharat-Bharti, Jamthi, Betul, Madhya Pradesh,India,bandiwaranjali152@gmail.com.8830163897
[2*]Assistant Professor, Department of Dravyaguna Vigyana, OM Ayurvedic Medical College & Hospital, Bharat-Bharti, Jamthi, Betul, Madhya Pradesh, India, misthy041024@gmail.com, 8818874743
[3]Assistant Professor, Department of Rachna Sharira, OM Ayurvedic Medical College & Hospital, Bharat-Bharti, Jamthi, Betul, Madhya Pradesh, India, dhoteneelam@gmail.com, 7972735972
[4]Assistant Professor, Department of Dravyaguna vigyana , OM Ayurvedic Medical College&Hospital,Bharat-Bharti, Jamthi, Betul, Madhya Pradesh, India

***Corresponding Author:** Dr.Pooja Sahu
*Assistant Professor, Department of Dravyaguna Vigyana, OM Ayurvedic Medical College & Hospital, Bharat-Bharti, Jamthi, Betul, Madhya Pradesh, India. Mobile: +91-8889420464 / +91-8818874743
Email: misthy041024@gmail.com CTRI Registration no: CTRI/2024/09/07451,
https://orcid.org/0009-0004-4582-3091
Acceptance - 2/3/2025
Publication-15 /4/2025

Abstract: One of the most prevalent manifestations and a primary contributor to a wide range of lifestyle problems, including pancreatitis, fatty liver, cardiovascular disease, and numerous other conditions, is dyslipidemia. In the Indian population, 25–30% of urban subjects and 15-20% of rural subjects have high cholesterol [1]. Ayurveda states that dyslipidemia is the result of Medovaha srotodushti. For the treatment of dyslipidemia, Nidan Privarjan (removal of causes) and recommendations for particular Pathya measures are helpful. In this instance, we used the aptarpana chikitsa (medovaha srotodushti chikitsa) approach to treat dyslipidemia. Causes of Ruksan, Lekhan, and Ushnagunas Aspatarpan, as medohara and lekhana, the laghu, ruksaguna, katu vipaka, and usnavirya of Haridra are particularly promising. In contemporary medicine, lipid-lowering therapies such as fibrates and statins are well tolerated with less side effects. However, this therapy is typically used for the rest of one's life and adds significantly to the cost of living in underdeveloped nations like India. Thus, for three months, the patient had treatment with Shamana Chikitsa and Kapha-meda Nashak Chikitsa, along with lifestyle adjustments. Through this case study, the authors hope to share their experiences and demonstrate the efficacy of specific Pathya Ahara-Vihara, or Ayurvedic approaches, in the therapy of dyslipidemia.

Keywords: Specific Pathya Measures, Ayurveda, Dyslipidemia, Medovaha Sroto Dushti, Haridra ghan vati , and Shaman Chikitsa

Introduction

Dyslipidemia is a metabolic disorder characterised by a chronic rise in the plasmatic concentration of lipids and lipoproteins.A condition of disrupted lipid metabolism, dyslipidemia is characterised by abnormalities in one or more of the blood's lipoproteins. This condition increases the risk of atherosclerosis, coronary artery disease, and cerebrovascular disease. It is brought on by an increase in unhealthy dietary habits and a sedentary lifestyle. Hypertriglyceridemia was present in 29.5% of cases, lowHDL-C was 72.3%, high LDL-C levels were 11.8%, and hypercholesterolemia was 13.9% of cases., per the ICMR-INDIAB study. [2] The classification of primary lipid problems might be based on the prevailing issues, such as mixed hyperlipidemia, hypertriglyceridemia, or hypercholesterolemia.[3]. The most common types of dyslipidemia in India are borderline high LDL cholesterol, low HDL cholesterol, and raised triglycerides.

Technology advancements, hectic schedules, sedentary lifestyles, and dietary modifications have all contributed to an individual's increased susceptibility to "Life Style Disorders," hyperlipidemia being one of them. The causes of secondary hyperlipidemia [2] include the following: hypothyroidism, pregnancy with Nephrotic

syndrome, anorexia nervosa, cholestatic liver disease, hyperparathyroidism, diabetes mellitus (type 2), chronic renal disease, abdominal obesity, excessive alcohol consumption, hepatocellular disease, and drugs (diuretics, corticosteroids). [5] According to Ayurveda, dyslipidemia is associated with either Rakta Dhatu (blood tissue) or Rasa (primary product of digested food) in Medo-Dushti (vitiation of fat tissue). All of the body's metabolic processes are powered by the digestive fire. Ama (a partially digested food product) is said to be produced as a result of improper Agni (metabolic components of the body) activity.[6] According to Ayurveda, sedentary lifestyles and high-fat diets (Snighdha, Guru, Pichhila) can lead to medovruddhi, a Santarpanjanya vyadhi (Cheshtadvesha, Asana sukha). It is believed that having Avyayama, Diwaswapna, Atisnigdha, Madhura, Adhyashan, Atimatra Ahara, and Beeja swabhava causes Medovaha srotodushti [3].

Over time, srotorodha (blockage) of the medovaha srotas causes abnormal tissue metabolism, which results in the illnesses linked with Medoroga, including disorders of Ama, Napunsakata, Kushtha, Sthaulya, and Dysuria [7]. This partially digested byproduct of food at this stage prevents the body from absorbing nutrients, which causes an abnormal rise in circulating Snehansha (unctuousness). This results in the creation of Abadha Meda Dhatu, or fat tissue, which causes dyspnea, increased tiredness during physical exertion, and the accumulation of fat in various areas of the body, including the buttocks, belly, and breast. Avoiding etiological variables, Apatarpana Chikitsa (depleting procedure), Shamana Chikitsa (palliative therapy), and lifestyle modifications are all part of the basic treatment plan. The Ayurvedic regimen and diet (Ahara) reduce dyslipidemia and offer superior control over the dosage of allopathic medications. In Ayurveda, dyslipidemia is associated with Medodustijanyavikaras. Medodusti is the result of nidanas such as atimadhura, atisiddha, guru ahara, avyama, avyavaya, and diwaswapna. Apatarpan should treat it since it is a Santarpanajanyavikara. Apatarpan is caused by ruksan, lekhan, and ushnagunas. Our Acharyas have described Haridra (Curcuma longa) as kustaghna, krimighna, lekhana, kaphanasana, varnya, and so on. As medohara and lekhana, the laghu, ruksaguna, katu vipaka, and usnavirya of Haridra are particularly promising. According to studies, haridra can promote the body's critical process of removing cholesterol from the body by converting cholesterol to bile acids. Another study demonstrates that taking a curcumin supplement led to a considerable reduction in blood triglycerides. Another demonstrates that curcumin inhibits the oxidation of cholesterol, reduces the amount of triglycerides, and marginally raises the the HDL-C levels. [8]

Aim and Objective: To study the effect of haridra ghan vati followed by pathya, apathya aahar and vihar changes in the treatment of dyslipidemia .

Case:

A fifty-year-old male patient arrived at the Mahatma Ghandhi Ayurvedic College & Research Centre Salod, Wardha, Maharashtra, OPD of Kayachikitsa. The patient, opd no. 2406210280, was contacted in February 2023 with signs and symptoms of overeating, swedadhikya, angagaurava, and katishoola, which had been present for a year. He had a history of heavy drinking, eating spicy cuisine, and working under pressure.

Physical examination and initial investigations:

Physical Examination: Blood Pressure -120/90 mmHg, Heart Rate -78/min, Height -168 cm Weight -83 kg, BMI -31.0

Past history:

The patient did not have a history of smoking, hypertension, or diabetes.

Drug history :

No any kind of drug history .

Rogi Pariksha: Prakruti: Kapha Pitta ,Sara: Madhyama ,Satva: Madhyama ,Samhanana: Madhyama ,Kostha: mrudu ,Agni: Vishama ,Pramana: Madhyama ,Aharashkti: Madhyama ,Jaranashakti: Madhyama ,Vyayamashakti: Madhyama ,Jihwa: Saama

Ashtavidha pariksha: Nadi : Vata pitta ,Mutra: 2-3 times ,Mala : 1 time/day ,Jihwa : Saama ,Shabda : Spashta ,Sparsha: Anushnsheet ,Druka: Prakruta ,Akruti : Madhyama

Clinical aspects:

The patient has been complaining for three months about being overweight, having leg pain that is not cramping, and being tired. He was asymptomatic prior to three months, but over the next two months, he gradually developed the symptoms listed above. A modern physician administered modern medicine from the statin group, but the patient did not notice any discernible change. He went to Kayachikitsa OPD's Ayurvedic management department with the same grievances and advice.

Study Design: Single case Study.

Material and Methods

Ayurvedic therapy:

After carefully reviewing the case, we provided the following Ayurvedic treatment, bearing in mind the statement that "Dietary modification is an important component in the therapy of dyslipidemia."[9]

I. Substances & Amount:

- Take two tablets of Haridra ghan vati (125mg) twice a day with warm water after meals.

II.Particular Pathya:

- Chapattis are produced with flour that has five elements (green mudga, yava, chanaka, gehu, and sawa chawal); they are also created with butter milk and veggies such bottle guard, bitter guard, drumstick,ginger,and garlic.[10]

III.Pathya Ahara, General:

- Vihara/lifestyle measures:

a) Eating when hungry (in three separate dosages).
b) Including takra, lashun, and green veggies in their diet
c) Walking for atleast ten minutes after each meal.
d) Strict guidance regarding the significance of vyayama during each appointment and encouragement of 30minutes of daily riding.

e) The practice of meditation[11].

IV.Avoidable lifestyle measures and apathy:
A) diet heavy in sugar and fatty,fried foods;
B) a non-vegetarian diet.
c) Sleeping throughout the day,
d) Eating spicy food, and
e) Drinking alcohol.

Observations and Results:

For three months, the patient took Haridra ghan vati along with a particular Pathya (chapatti made of multigrain flour) and adhered to lifestyle adjustment on a daily basis. Follow-ups were conducted once every month. Clinical Symptoms, and other investigations were assessed after 3 month follow-up lipid profile.

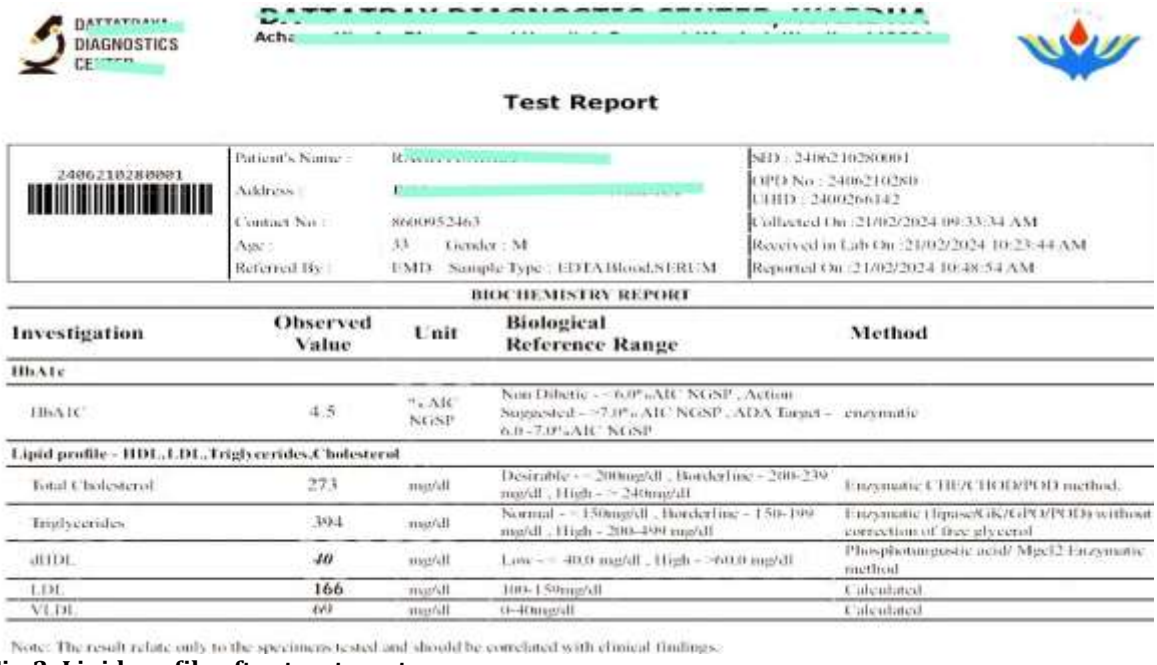
Assessment of Lipid Profile

Parameters	Before Treatment (mg/dL)	After Treatment (mg/dL)
Cholesterol	273 mg/dL	202 mg/dL
Triglycerides	394 mg/dL	145 mg/dL
HDL	40 mg/dL	38 mg/dL
LDL	166 mg/dL	144 mg/dL
VLDL	mg/dL	35 mg/dL

Assessment of Clinical Signs and Symptoms

Symptoms	Before Treatment	After Treatment
Weight	83kg	78 kg
Lethargy	Present	Relieved 80%
Excessive Sweating	sweating following light exercise and activity.	sweating following strenuous activity and work
Leg Pain	Present	No significant effects

Lab investigation report :
Fig-1: Lipid profile before treatment



DIAGNOSTICS

Test Report

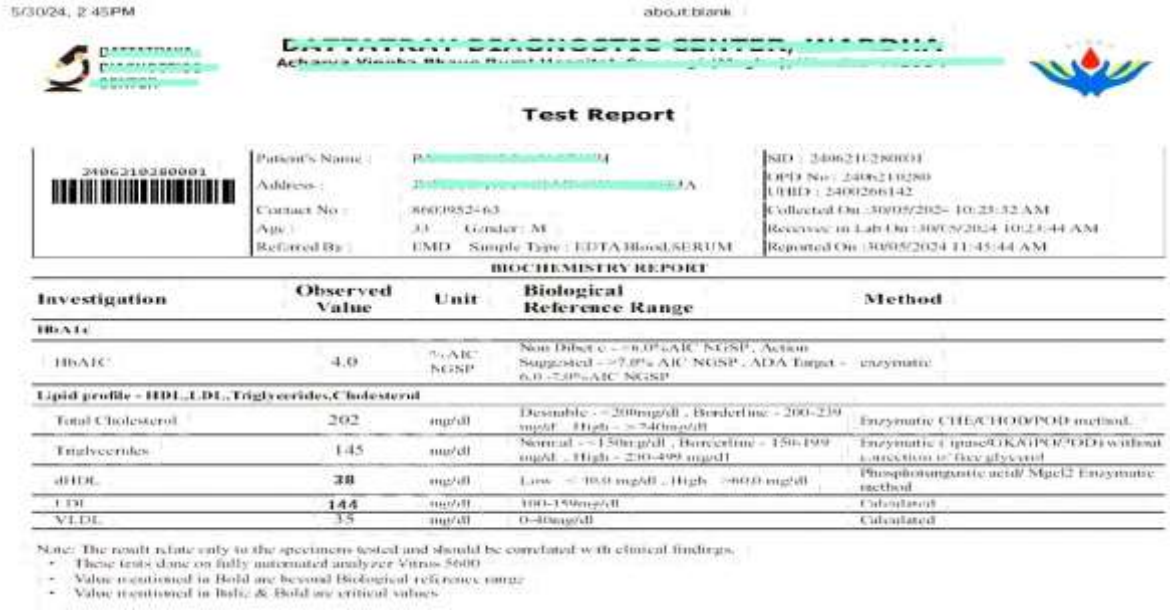
2406210280001	Patient's Name :	SID : 2406210280001
	Address :	OPD No : 2406210280
		UHID : 2400266142
	Contact No : 8600952463	Collected On :21/02/2024 09:33:34 AM
	Age : 33 Gender : M	Received in Lab On :21/02/2024 10:23:44 AM
	Referred By : UMD Sample Type : EDTA Blood,SERUM	Reported On :21/02/2024 10:48:54 AM

BIOCHEMISTRY REPORT

Investigation	Observed Value	Unit	Biological Reference Range	Method
HbA1c				
HbA1C	4.5	% AIC NGSP	Non Diabetic - = 6.0% AIC NGSP , Action Suggested - >7.0% AIC NGSP , ADA Target - 6.0 -7.0% AIC NGSP	enzymatic
Lipid profile - HDL,LDL,Triglycerides,Cholesterol				
Total Cholesterol	273	mg/dl	Desirable - = 200mg/dl , Borderline - 200-239 mg/dl , High - > 240mg/dl	Enzymatic CHE/CHOD/POD method.
Triglycerides	394	mg/dl	Normal - = 150mg/dl , Borderline - 150-199 mg/dl , High - 200-499 mg/dl	Enzymatic (lipase/GK/GPO/POD) without correction of free glycerol
dHDL	40	mg/dl	Low - = 40.0 mg/dl , High - >60.0 mg/dl	Phosphotungustic acid/ Mgcl2 Enzymatic method
LDL	166	mg/dl	100-150mg/dl	Calculated
VLDL	69	mg/dl	0-40mg/dl	Calculated

Note: The result relate only to the specimens tested and should be correlated with clinical findings.

Fig-2: Lipid profile after treatment



5/30/24, 2:45PM about:blank

DIAGNOSTICS

Test Report

2406210280001	Patient's Name :	SID : 2406210280001
	Address :	OPD No : 2406210280
		UHID : 2400266142
	Contact No : 8600952463	Collected On :30/05/2024 10:23:32 AM
	Age : 33 Gender : M	Received in Lab On :30/05/2024 10:23:44 AM
	Referred By : UMD Sample Type : EDTA Blood,SERUM	Reported On :30/05/2024 11:45:44 AM

BIOCHEMISTRY REPORT

Investigation	Observed Value	Unit	Biological Reference Range	Method
HbA1c				
HbA1C	4.0	% AIC NGSP	Non Diabetic - = 6.0% AIC NGSP , Action Suggested - >7.0% AIC NGSP , ADA Target - 6.0 -7.0% AIC NGSP	enzymatic
Lipid profile - HDL,LDL,Triglycerides,Cholesterol				
Total Cholesterol	202	mg/dl	Desirable - = 200mg/dl , Borderline - 200-239 mg/dl , High - > 240mg/dl	Enzymatic CHE/CHOD/POD method.
Triglycerides	145	mg/dl	Normal - = 150mg/dl , Borderline - 150-199 mg/dl , High - 200-499 mg/dl	Enzymatic (lipase/GK/GPO/POD) without correction of free glycerol
dHDL	38	mg/dl	Low - = 40.0 mg/dl , High - >60.0 mg/dl	Phosphotungustic acid/ Mgcl2 Enzymatic method
LDL	144	mg/dl	100-150mg/dl	Calculated
VLDL	35	mg/dl	0-40mg/dl	Calculated

Note: The result relate only to the specimens tested and should be correlated with clinical findings.
- These tests done on fully automated analyzer Vitros 5600
- Value mentioned in Bold are beyond Biological reference range
- Value mentioned in Italic & Bold are critical values

Discussion

1. A key component of the basic matrix of medovaha-sorotodushti in the pathophysiology of dyslipidemia is the hypofunctioning of medodhatvagni in conjunction with the vitiation of khapa dosha.[12]
2. The medovaha srotodushti is managed according to the Ahara and Vihara recommendations, which have the effect of lowering excess medodhatu and kapha. Ahara-Vihara are regarded in Ayurveda as both therapeutic and Pathya measures during therapy. The treatment of kapha-medohara, dietary changes, and the encouragement of jatharagni should be given top emphasis when managing dyslipidemia.
3. Reducing the kapha dosha, rearranging the meda, and preventing further vitiation of the kapha dosha and medodhatu are the properties of the AharaVihara recommendations utilised here in the management of medovaha srotodushti. [13].
4. In contemporary medicine, there are efficacious dyslipidemic medications, such as statins, that provide immediate relief and continue to be the cornerstone of lipid-modifying treatments, although they may have some long-term adverse consequences. Thus, a long-term, safe substitute

therapy that may be successful in lowering cholesterol levels is required.

5. We advised riding as a means of keeping up with Vyayamm. Among the assortment of unprocessed foods are barley (Hordeum valgare), wheat (Triticum aestivum), green moong (Vigna radiate), chana (Cecer arietinum), and sava ka chawal (a kind of rice) = Echinochloa frumentacea. By milling these five ingredients in equal amounts, flour was created, and chapattis were cooked. This flour also possesses the tridosha shamana quality, which lowers the kaphameda due to the gunas of ruksha, kashaya,laghu,and virukhshana.[14]
6. Pathya may work by monitoring the intestine absorption of cholesterol and restoring normal liver synthesis of endogenous lipoprotein creation. Haridra is useful in boosting bile solubility and biliary excretion of bile salts, cholesterol, and bilirubin; as a result, it may help prevent and cures cholelithiasis, or bile stones. Haridra's anti-inflammatory and lipolytic qualities assist lower liver weight in patients with fatty liver disease by preventing the buildup of liver fat. It lowers low-density lipoprotein-cholesterol (LDL-c), triglycerides, total lipids, and cholesterol.[15]
7. Bhavprakash Nighantu claims that Haridra possesses attributes similar to pittahar and kaph vaathar. rasavaha, medovaha, and swedavaha are the medodhatvagni mandyarotas that katu vipak acts to eradicate. Laghu gunatmak works on the mala of rasa dhatu, which is kaph (kleda), as haridra is ruksha.
8. Haridra, who is katu-tikta rasatmak and is stated in ajirna, leads to the karma of deepan, pachan, kledhara, and medohara, which are mentioned in tikta rasa. It corrects jathargani and leads to vatanuloman because of deepan pachan karma. Ushna veerya and katu vipak of Haridra have been discovered to rectify vibandha, malabadhata (constipation) observed in sthaulya rogi, resulting in srotoshodhan. It has attributes similar to medaghna, according to Ashtang Hruday.[9] Because it rectifies the medodhatvagni mandya and possesses the qualities of ruksha, laghu, and lekhana, it may also tend to treat the pathophysiology of sthaulya and do lekhana of accumulated medodhatu. All five of the patients chosen for this study have been found to have both Haridra ghan vati and its lekhana karma, as well as mala shodhan karma of haridra. lekhana karma and medohar property are its references, and it has been chosen in accordance with Charaka and Ashtang Hruday.

Conclusion:

Oral ayurvedic medication administration for the treatment of dyslipidemia demonstrated efficacy in lowering lipid profile biochemical markers.Thus, it can be concluded that the use of herbal medications in combination with dietary and lifestyle modifications can benefit in the management of certain types of diseases and safely prevent their adverse effects.

Ultimately, we came to the conclusion that stringent Pathya-apathya methods are useful in returning the body weight, BMI, and abnormal lipid profile to normal. At the completion of therapy, the clinical symptoms resolved and no adverse effects were noted. Thus, we can conclude that a few safe and affordable interventions may benefit individuals with metabolic syndrome, obesity, diabetes, hypertension, CHD, and other conditions. These simple natural techniques lower the risk of dyslipidemia by controlling and preventing it.

However, further large-scale clinical studies with longer follow-up periods are recommended to validate these findings and establish stronger scientific evidence.

References :

1. ncbi.nlm.nih.gov/pmc/articles/ PMC5485409, By Rajiv Gupta, Ravinder S. Rao, Anup Mishra, on 06 March 2017
2. Prevalence of Dyslipidemia in Urban and Rural India: The ICMR–INDIAB Study, Published: May 9, 2014 https://doi.org/10.1371/journal.pone.0096808
3. Harrison T, Kasper D. Harrison’s principles of internal medicine. New York: McGraw-Hill Medical Publ. Division; 2015.
4. Joshi S, Anjana R, Deepa M, Pradeepa R, Bhansali A, Dhandania V et al. Prevalence of Dyslipidemia in Urban and Rural India: The ICMR–INDIAB Study. PLoS ONE 2014;9(5): e96808.
5. Davidson’s Principle And Practice of Medicine, 22nd Edition, Chapter no16, Page no- 454.
6. Shastri S. Madhav Nidan Utatar Khanda Ch 25 ver.14 Chaukhamba Prakashan, Vranasi. 2013.p.198.
7. Kashinath Shastri and Gorakhnath Chaturvedi, Agnivesha, Charaka Samhita. Sutrasthana 23/5-7, page. No – 437.
8. Comprehensive Review of Haridra and DaruharidraKashaya on Diabetic Retinopathy, GajabhePragati R. MateriaMedica of Ayurda based on MadanpalaNighantu, Vaidya Bhagwan Das. 27. Effects of supplementation with curcuminoids on Dyslipidemia in obese patients a randomized crossover. htt:/pubmed.ncbi.nlm.nih.gov.

9. Kaviraj Govinda Das Sen. Bhaisajyaratnavali. Siddhipada Hindi Commentary, Prof. Siddhinandana Mishra editor. 1st edition. Chapter no-53, Varanasi: Chaukhamba Surbharati Prakashana; 2012,pg 142. . Ibid 23/5-7, p 437.
10. Ibid 21/25-27, page 415. 10. a- Ibid 21/25-28, page 415. b- Ibid 21/25-28, p415.
11. Agnivesh Charak Samhita, Vimanasthana 5/15-16, page713 By Kashinath Shastri & Gorakhnath Chaturvedi.
12. Ibid 27/16, 20,22,23,28.
13. Niranjan, Abhishek & Prof, Dhan. (2008). Chemical constituents and biological activities of turmeric (Curcuma longa L.) -A review. Journal of Food Science and Technology. 45. 109-116.
14. Yang, Qu & Liu, C. & Ren, X. & Zhang, Y. (2013). Chemical constituents from the tuber of Curcuma longa. Journal of China Pharmaceutical University. 44. 207-209.
15. Effects of curcumin/turmeric supplementation on lipid profile: A GRADE-assessed systematic review and dose–response meta-analysis of randomized controlled trials Mohammad Jafar Dehzad a , Hamid Ghalandari b , Mohammad Reza Amini c , Moein Askarpour a.