iJRASET
International Journal For Research in Applied Science and Engineering Technology



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

**Volume:** 12 **Issue:** XII **Month of publication:** December 2024

**DOI:** https://doi.org/10.22214/ijraset.2024.65747

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
*ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538*
*Volume 12 Issue XII Dec 2024- Available at www.ijraset.com*

# Ayurvedic Management of Dyslipidemia: A Case Study

Dr. Charu Walia[1], Dr. Neelam[2]
[1]*P.G Scholar,* [2]*Professor and Chairperson, Department of Kayachikitsa, Institute For Ayurved Studies & Research, Faculty Of Ayurveda, SKAU, Kurukshetra, Haryana.*

***Abstract:*** ***Introduction- Dyslipidemia is a state that occurs due to the abnormalities of lipids in the blood, such as elevated total cholesterol (TC), elevated triglycerides (TG), low level of high-density lipoprotein cholesterol (HDL-C) and elevated low-density lipoprotein cholesterol (LDL-C). Most patients are asymptomatic for years. Symptomatic patients may complain of dyspnea, Excessive Hunger, Excessive Sweating, Bad Odour, Generalized Weakness, lethargy etc. The contemporary science uses Statins for the treatment which leads to side effects like including headache, nausea, vomiting, gastrointestinal problems, disturbed sleep, muscle aches, myopathy etc. This case report represents the significance of Ayurvedic treatment in the management of Dyslipidemia. Material and methods- In this study patient with complaints of generalized weakness with feeling of heaviness in body approached to the Kayachikitsa OPD of Institute for Ayurved Studies and Hospital. The treatment plan was shaman chikitsa like Tab. Kanchnar guggulu for a period of 28 days. Result- Following this protocol, the patient got approximately 60% relief in all sign and symptoms. Discussion- Based on the case study, it can be concluded that Kanchnar Guggulu is effective in the management of Dyslipidemia.***
***Keywords: Ayurvedic management, Dyslipidemia, Kanchnar guggulu***

## I. INTRODUCTION

Dyslipidemia is one of the life style disorders due to the today's faulty life style. It may be manifested by elevation of the Total cholesterol or the rise in triglyceride concentrations and a decrease in the good High Density Lipoprotein (HDL) cholesterol concentration in the blood. Dyslipidemia, characterized by aberrations in lipid metabolism, has multifaceted etiologies influenced by genetic, environmental, and lifestyle factors. Dyslipidemia can be classified into 2 types based on the etiology. Primary dyslipidemia can be inherited as an autosomal dominant, autosomal recessive, or X-linked. Secondary dyslipidemia is caused by lifestyle factors or other medical conditions that alter the levels of lipids in the blood. Secondary dyslipidemia is reversible or modifiable by addressing the underlying cause. Some examples of secondary dyslipidemia risk factors include physical inactivity, unhealthy nutrition, obesity, diabetes, hypothyroidism, chronic kidney disease, liver disease, alcohol abuse, smoking, and the use of certain drugs.Dyslipidemia is widely regarded as a major risk factor for Coronary Heart Disease (CHD), for every 1% increase in cholesterol level there is 1-2% increase in the incidence of CHD. According to the World Health Organization (WHO), 39% of the world adult population has been affected by elevated blood cholesterol, with a relatively higher prevalence among women (40%) than among men (37%). Metabolic non-communicable disease health report of India: the ICMR-INDIAB nationwide cross-sectional epidemiological study (ICMR-INDIAB-17) on 113043 individuals (79506 from rural and 33537 from urban areas) showed the overall prevalence of dyslipidemia to be 81.2 %.[(1)] Diagnosis often relies on lipid profile tests, with recommended target levels for optimal cardiovascular health. Treatment strategies work to mitigate risks by targeting specific lipid abnormalities, emphasizing lifestyle modifications, and considering comorbidities to individualize care.

### *A. Patient Information*

A daily wager, married man aged 45 years from Kurukshetra, Haryana, visited the OPD of our Hospital on 19 september 2024. The patient was non-alcoholic, a non-smoker, and preferred vegetarian food. He had a fair appetite, he eats regular homemade food, mostly chapattis with seasonal vegetables. He had normal sleep and frequency of micturition 6-7 times per day.

The patient complained of generalized weakness with feeling of heaviness in body daily for the past three months. The associated symptoms were generalized weakness, fatigue, and feeling of tiredness after doing some work. A detailed history of the patient revealed that he was a known case of type 2 diabetes mellitus since 2 years and has been taking oral hypoglycemic agents for type 2 DM. With all these complaints patient visited the OPD.

©IJRASET: All Rights are Reserved 

*B. Clinical Findings*

The patient weighed 72 kgs, was well built with a white coated tongue and normal body temperature, regular pulse rate of 74/min, respiratory rate of 16/min, and blood pressure of 110/80 mm Hg. The abdominal examination and chest examination showed no abnormality. He had normal bowel habit with semi-solid consistency of stool and had a micturition frequency of 6-7 times daily. The *Ashtavidha Pareeksha,* revealed the *nadi* of the patient to be *Vata-pittaja*, regular with 74 beats per minute. *Mala* was *Aama Mala* with 1 *vega* per day. *Mutra* was *Ishat peeta varni* 6-7 times per day. *Jihwa* was *Shwetabh Aavrita (white-coated). Shabda* of patient was *Spashta*. *Sparsha* of patient was *Samasheetoshna* with *Samanya Drika* and *Madhyama Aakriti*.

*C. Diagnostic Assessment*

The diagnostic criteria of Dyslipidemia was based on subjective and objective parameters explained in Ayurvedic and Modern text. All these symptoms assessment will be done by using Symptom Rating Scale as following.

| | |
|---|---|
| Absence of symptoms | 0 |
| Mild degree of symptoms | 1 |
| Moderate degree of symptoms | 2 |
| Severe degree of symptoms | 3 |
| Agonizing symptoms | 4 |

Following symptoms ***M.N. Medoroga Nidan***[(2)] will be assessed: -

Table :1- Grading of Subjective Parameters.

*1) Kshudra Shwasa* (Exertional Dyspnoea)

| | |
|---|---|
| No Dyspnoea even after heavy work | 0 |
| Dyspnoea after moderate work but relieved later and tolerable | 1 |
| Dyspnoea after little work but relieved later and tolerable | 2 |
| Dyspnoea after little work but relieved later and not tolerable | 3 |
| Dyspnoea in resting condition | 4 |

*2) Trishna (Increased thirst)*

| | |
|---|---|
| Feeling of thirst (7 – 9 times/24 hours) & relieved by drinking water | **0** |
| Feeling of moderate thirst (>9 - 11 times/24 hours) & relieved by drinking water | **1** |
| Feeling of excess thirst (>11 – 13 times/24 hours) not relieved by drinking water | **2** |
| Feeling of sever thirst (>13 times) not relieved by drinking water | **3** |

*3) Moha (Drowsiness)*

| | |
|---|---|
| No drowsy (doing work satisfactorily ) | **0** |
| Doing work with desire with initiation but late in time | **1** |
| Does work without desire with lot of mental pressure and late in time | **2** |
| Does not initiate work, does little work very slowly | **3** |
| Doesn't take initiative to work neither want to work even after pressure | **4** |

4) *Atinidra* (Increased Sleep):

| | |
|---|---|
| Normal & sound sleep for 6 – 8 hrs. /24 hrs.<br>With feeling of lightness and relaxation in the body & mind | **0** |
| Sleep >8 -9 hrs. /24 hrs. with slight heaviness in the body | **1** |
| Sleep >9 - 10 hrs. /24 hrs. With heaviness in the body associated with *jrimbha* | **2** |
| Sleep >10 hrs. /24 hrs. with heaviness in the body associated with *jrimbha* &*tandra* | **3** |

5) *Krathana (Snoring)*

| | |
|---|---|
| No snoring | **0** |
| Occasional snoring | **1** |
| Snoring in some part of sleep | **2** |
| Snoring all the time of sleep | **3** |
| Interrupted sleep due to snoring and snoring accompanied by apnea | **4** |

6) *Angasada* (Fatigue):

| | |
|---|---|
| No heaviness | **0** |
| Occasionally feeling of heaviness for sometimes in hands and feet | **1** |
| Feeling of heaviness for sometimes in hands and feet not affecting activities of daily living | **2** |
| Daily feeling of heaviness over body, which leads to *Akarmanyata* | **3** |
| Most part of the body for long duration | **4** |
| All body for most part of the day | **5** |

7) *Atikshudha (Increased Appetite): (1 meal = about 350gm diet)*

| | |
|---|---|
| As usual / routine | **0** |
| Slightly increased (1 meal extra with routine diet) | **1** |
| Moderately increased (2 meals extra with routine diet) | **2** |
| Markedly increased (3 meals extra with routine diet) | **3** |

8) *Swedadhikya (Perspiration):*

| | |
|---|---|
| Sweating after heavy work | **0** |
| Profuse sweating after moderate work and movement | **1** |
| Sweating after little work and movement (stepping ladder etc.) | **2** |
| Profuse sweating after little work and movement | **3** |
| Sweating even at rest or in cold weather | **4** |

*9) Daurgandhya (Bad odour):*

| | |
|---|---|
| No odour | **0** |
| Bad odour but not offensive | **1** |
| Strong odour but can be lessened by use of deodorants or perfumes | **2** |
| Very strong odour even after using fragrances (use of deodorants or perfumes) | **3** |

*10) Alpapraan* (General Debility):

| | |
|---|---|
| Feeling of well being | **0** |
| Tired after doing strenuous physical activity | **1** |
| Tired after doing moderate physical activity but can perform daily Activity | **2** |
| Perform daily activity with difficulty | **3** |
| Extremely tired to carry out daily routine activity | **4** |

*11) Alpamaithuna (Loss of Libido):*

| | |
|---|---|
| Normal performance without external stimulation | **0** |
| Decreased frequency with normal performance | **1** |
| Decrease frequency with insufficiency | **2** |
| Normal performance with external stimulation | **3** |
| No sexual stimulation at all | **4** |

## II. OBJECTIVE CRITERIA

The primary objective criteria in case study is

*1)* S. Cholesterol
*2)* S. Triglyceride
*3)* LDL

Diagnosed & confirmed cases of *Medodushti* (Dyslipidemia) on the basis of criteria given by NCEP-ATPIII.[3]

| Blood test | Desirable | Borderline High | High |
|---|---|---|---|
| Total Cholesterol | < 200 mg/dl | 200 - 239 mg/dl | >240 mg/dl |
| Serum Triglycerides | < 150 mg/dl | 150 -199 mg/dl | 200-499 mg/dl (high)<br>>500mg/dl (very high) |
| LDL | < 100 mg/dl (optimal)<br>100 -129 (near optimal) | 130- 159 mg/dl | 160 -189 mg/dl (high)<br>>190 mg/d (very high) |
| HDL | 40 -60 mg/dl | | |
| VLDL | 5 -40 mg/dl | >40mg/dl | |

| | | | |
|---|---|---|---|
| HDL/LDL | >0.40 mg/dl | 0.25-0.3 mg/dl | |
| LDL/HDL | 1.5 -3.5 mg/dl | 3.5 -4 mg/dl | |
| Triglycerides/HDL ratio | < 3.12 mg/dl | mg/dl | |

Treatment

*Shaman Chikitsa* Protocol adopted

| | | |
|---|---|---|
| First visit and initiation of shaman chikitsa | | |
| | Drug | Dose and duration |
| | Tab *Kanchnar Guggulu (250mg)* | 2 Tab BD after meal with luke warm water |
| Second visit (first follow-up) after 14 days | | |
| | *Tab Kanchnar Guggulu (250mg)* | 2 Tab BD after meal with luke warm water |
| Third visit (Second follow-up) after 28 days | | |
| | *Tab.Kanchnar Guggulu (250mg)* | 2 Tab BD after meal with luke warm water |

Pathya ahara- vihara (~ Wholesome diet and activity )

During the course of treatment, patient was also advised *Pathya aahar- vihara* along with the medications. He was advised to take *Laghu aahara* (~easily digestible ) , fresh home cooked food. *Guru Aahara* (~ difficult to digest ) , *Divasawapan* (~ Day time sleep ), excessive physical work were also advised to be avoided. Proper rest along with proper sleep of eight hours were advised. *Suryanamaskar*, *shawasana* and meditation along with 20 minutes morning walk were advised.

Follow up And Outcome :

Follow-up was taken on weekly basis for 28 days. Symptoms were reduced significantly and currently he is following Pathya aahar and vihara and his personal as well as occupational life has also improved.

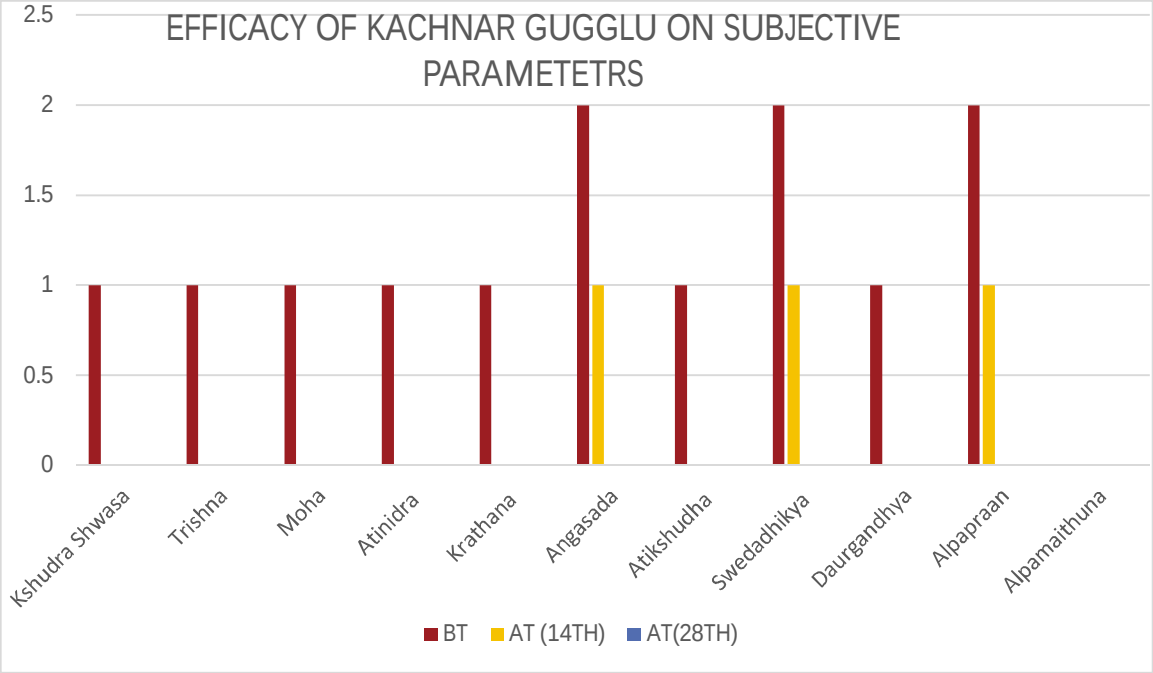
## III. OBSERVATION AND RESULTS

On Subjective Parameters

TABLE 1 Effect of Intervention on subjective parameters of the patient :

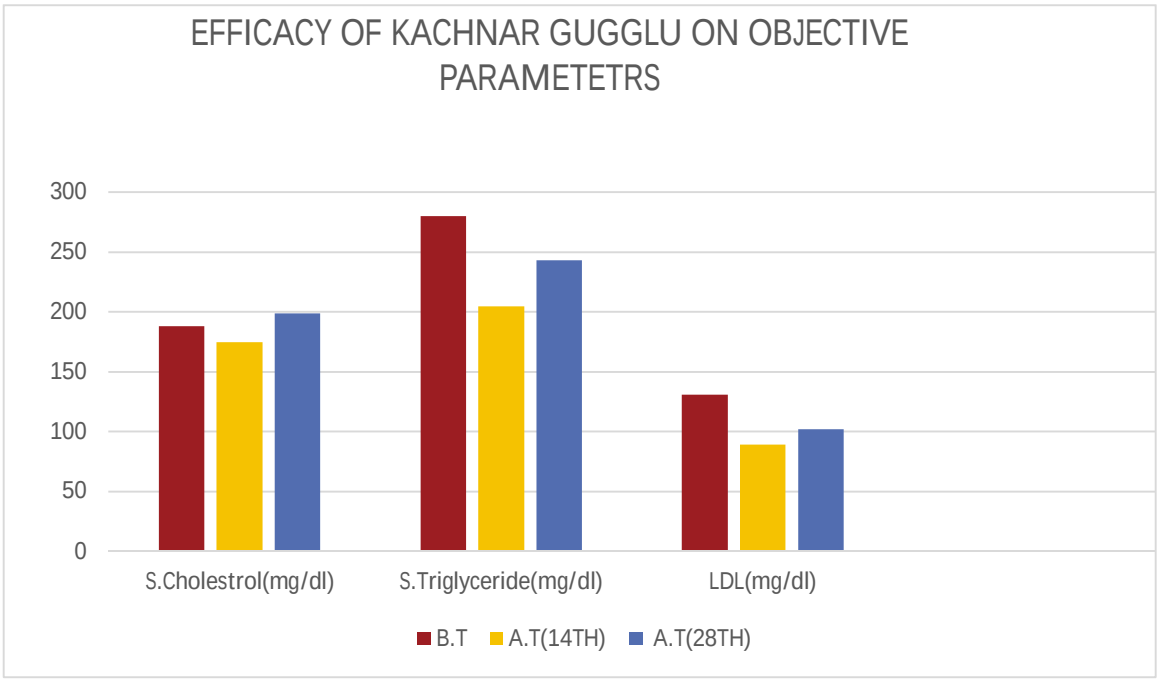
| Subjective parameters | BT | AT | | RELIEVED | % | Result |
|---|---|---|---|---|---|---|
| | | $14^{th}$ day | $28^{th}$ day | | | |
| Kshudra Shwasa | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Trishna | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Moha | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Atinidra | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Krathana | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Angasada | 2 | 1 | 0 | 1.5 | 75% | Excellent |
| Atikshudha | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Swedadhikya | 2 | 1 | 0 | 1.5 | 75% | Excellent |
| Daurgandhya | 1 | 0 | 0 | 1 | 100% | Satisfactory |
| Alpapraan | 2 | 1 | 0 | 1.5 | 75% | Excellent |
| Alpamaithuna | 0 | 0 | 0 | 0 | 0 | - |

Figure 1




Changes in objective parameters of the patient :

| | BT | AT | | BT-AT | Percentage | Result |
|---|---|---|---|---|---|---|
| | | 14th | 28th | | | |
| S. Cholesterol | 188mg/dl | 174.52 mg/dl | 199 mg/dl | 1.24 | 0.65% | Non-satisfactory |
| S. Triglyceride | 280mg/dl | 204.7 mg/dl | 243 mg/dl | 56.15 | 19.4% | Non-satisfactory |
| LDL | 131 mg/dl | 89 mg/dl | 102 mg/dl | 35.5 | 27% | Good |



## IV. DISCUSSION

### A. Discussion on Disease

On the basis of sign and symptoms mentioned in classical texts of Ayurveda and Modern, patient was diagnosed with Dyslipidemia, causing imbalance in levels of S. cholesterol, S. Triglyceride and LDL in blood. Imbalance of Meda Dhatu caused by impaired metabolic fire (Dhatwaagnimandyata ) at the tissue levels results in improper digestion(Ama or Vaikrit Kapha) and assimilation of nutrients. It further leads to improper transformation of nutrients into Meda Dhatu resulting in excessive and improperly processed fat tissue (Asthayi Meda) causing MedoDushti.

### B. Discussion on Medication

The intervention Kanchnar Guggulu comprises drugs that possess Katu (pungent) and Tikta (bitter) rasa along with Laghu (light) and Ruksha (dry) Guna. The Ushna (hot) Veerya (potency) and Katu Vipaka of these drugs specifically target vitiated Kapha, thereby improving metabolic and digestive functions by enhancing Agni (digestive fire). Deepan (igniting), Chedan (cutting) and Lekhana (scraping) properties of Kanchnaar Guggulu help in boosting agni and making it effective in management of Dyslipidemia (Medodushti).

### C. Discussion on Subjective Parametres

On subjective parameters, Kshudra Shwas, moha, atinindra, Krathana, daurgandhya, and atishudha, Kanchnaar guggulu showed showed excellent result with 100% relief. On swedadhikya, alpprana and angsada, satisfactory results were obtained with 75% relief. Hence, clinical efficacy of the intervention Kanchnaar Guggulu was proved excellent in lowering Subjective parameters.

### D. Discussion on Objective Parametres

On objective criteria, S. Cholesterol before and after treatment was lowered by 1.24 mg/dl (0.65%) showing non- satisfactory result. S. triglyceride lowered by 56.15 mg/dl(19.4%) indicating non-satisfactory results but LDL before and after treatment lowered by 35.5 mg/dl (27%) showing good result of Kanchnaar Guggulu in lowering LDL levels. Hence, Kanchnaar Guggulu clinically showed good effect in restoring LDL to a normal value.

## V. SUMMARY AND CONCLUSION

Male patient aged 45 years, was treated with Ayurvedic intervention Kanchnaar Guggulu for Dyslipidemia, in Kayachikitsa OPD in IASR&H, Kurukshetra. He was diagnosed on the basis of signs and symptoms mentioned in Ayurveda and Modern texts. He was administered with 2 Tablets of Kanchnar Guggulu (each weighing 250mg) twice a day with luke warm water after meals for a duration of 28 days. Patient was assessed clinically at a regular interval of 14 days. Patient followed all Pathya Ahar Vihar mentioned in Ayurvedic texts. No adverse effect of intervention had been observed during clinical case study. 100% excellent results on most of the subjective parameters shows the clinical efficacy of an Ayurvedic intervention Kanchnaar Guggulu on Dyslipidemia. Good results on Low-density lipoproteins shows the efficacy of an intervention in the management of dyslipidemia through Ayurvedic line of treatment.

## VI. LIMITATIONS

Study duration: This study was conducted for a short period of 28 days which may have been insufficient to capture the long term effects of Kanchnaar Guggulu and the ability to assess sustained outcomes.

## VII. IMPLICATION AND RECOMMENDATION

Long term follow-up: Including longer follow-up periods to evaluate the sustained effect of Kanchnaar Guggulu in the management of Dyslipidemia.

## VIII. DECLARATION OF CONSENT

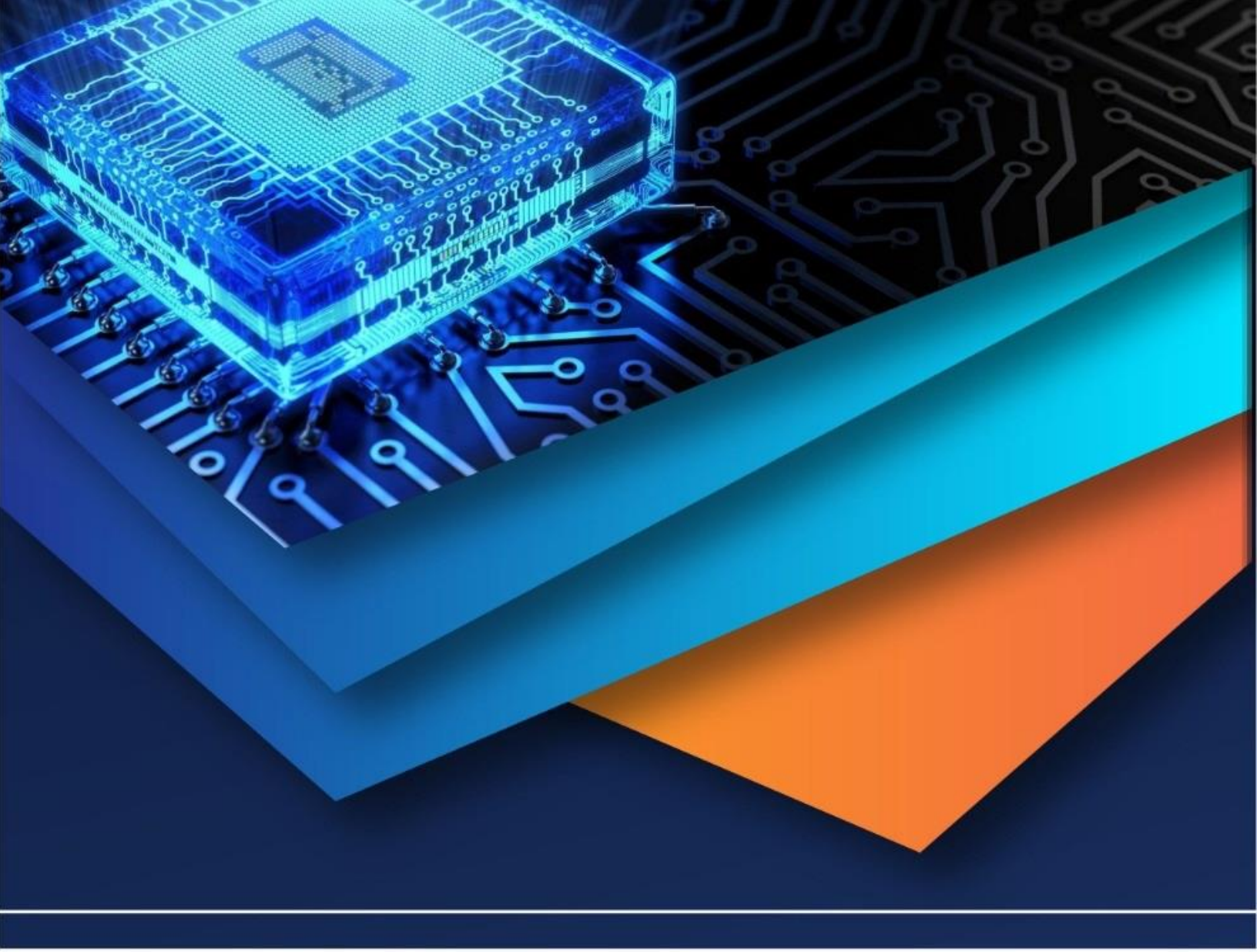
Authors certify that they have obtained patient consent form, where the patient has given his/her consent for reporting the case along with the images and other clinical information in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

## IX. FINANCIAL SUPPORT AND SPONSORSHIP

Nil.

## REFERENCES

[1] Prevalence of Dyslipidemia in Urban and Rural India: The ICMR–INDIAB Study, Published: May 9, 2014 https://doi.org/10.1371/journal.pone.0096808
[2] Madhavkara. Madhav nidana. 1st ed. Varanasi: Chaukhamba Prakashan; 2019. p. 38 (vol 1). Chapter 34, Verse 3.
[3] Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults. Executive summary of the third report of national cholesterol education programme (NCEP)ATP III. JAMA [serial online] 2001 May [cited 2001 May 16]; 285(19):[2497]. Available from: URL:https://jamanetwork.com/journals/jama/article.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)