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EFFECT OF CAP. VRIKSHAMLA (FRUIT EXTRACT) ON DYSLIPIDEMIA-A CASE STUDY

Dr. Vivek Kumar Dwivedi[1]*, Dr. Sabhyata Singh[2], Dr. Ajay Kumar Sahu[3] and Dr. Ram Kishor Joshi[4]

[1]P.G Scholar (3rd Year), P.G. Department of Kayachikitsa, NIA, Jaipur, Rajasthan.
[2]Junior Resident-3, Department of Stree Roga and Prasuti Tantra, BHU, Varanasi, U.P.
[3]Asst. Professor, P.G. Department of Kayachikitsa, NIA, Jaipur, Rajasthan.
[4]Professor and HOD, P.G. Department of Kayachikitsa, NIA, Jaipur, Rajasthan.

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***Corresponding Author**
Dr. Vivek Kumar Dwivedi
P.G Scholar (3rd Year),
P.G. Department of Kayachikitsa, NIA, Jaipur, Rajasthan.

ABSTRACT

Dyslipidemia is a rise in plasma cholesterol, triglycerides or both (Low density lipoproteins, total cholesterol and high density lipoproteins ratio) in the blood. Obesity is frequently though not invariably accompanied by dyslipidemia as a secondary cause.[1] The treatment of obesity, if present can have a favourable impact on plasma lipid levels and should be actively encouraged.[2] It is a major lifestyle disorder in affluent societies which has been referred as the *santarpanjanya vyadhi* (over nutrition) in the classical texts.[3] Obesity exacerbates a large number of health related problems, both independently and in association with other diseases. The line of treatment of *sthoulya* is described as *Nidanparivarjana* and *Apatarpana Chikitsa*.[4] In this case study extract of *Vrikshamla* in capsule form were given. At the end of the 30th day treatment, this herbal drug (cap. *Vrikshamla* extract) showed good results in symptoms of obesity as well as complete normancy in lipid profile.

KEYWORDS: Dyslipidemia, Obesity, *sthoulya*, *santarpanjanya vikara*.

INTRODUCTION

Dyslipidemia is the condition of abnormally elevated levels of any or all lipids and/or lipoproteins in the blood. Dyslipidemia and obesity are the reflections of various factors like food habits, lifestyle, inherent genetic characteristics, diabetes, renal diseases etc. Dyslipidemia may be a clearly risk factor for coronary artery disease. Obesity is a metabolic

disorder, generally occurring in affluent societies, because of imbalance between energy intake and energy expenditure. It is associated with mortality and predisposes to the development of fatal diseases like – Diabetes, Hypertension, MI etc. It is also expressed in terms of body mass index. Obesity is frequently though not invariably accompanied by dyslipidemia as secondary cause. The increase in adipocyte mass and accompanying decrease in insulin sensitivity associated with obesity have multiple effects on lipid metabolism. More free fatty acids are delivered from the expanded adipose tissue to the liver where they are re-esterified in hepatocyte to form triglycerides, which are packaged into VLDL for secretion into the circulation. High dietary intake of simple carbohydrates also drives hepatic production of VLDL leading to increase in VLDL or/and LDL in some obese individuals. Dietary and life style modification is the initial therapy recommended in the management of dyslipidemia. If dyslipidemia is associated with the treatment of obesity can have a favourable impact on plasma lipid levels and should be actively encouraged. Based on the guidelines of ADA and the American Heart association, the priorities in the treatment of dyslipidemia is-

(1) lower the LDL cholestorol,

(2) Raise the HDL Cholesterol

(3) Decrease the triglycerides.

Obesity with dyslipidemia are described under the umbrella of *Santarpanjanya vikara*. i.e. *sthoulya* with *asthayi medodhatu vriddhi*. It is a major life style disorder which has been described as *santarpanjanya vyadhi* (over nutrition) in the classical texts. *Acharya Sushruta* clearly explained the *Rasadhatwagni mandya* which directly leads to *medo dhatwagnimandya* leads to *rasagata, raktagata sneha vriddhi, Ashtayi medodhatu vriddhi* i.e. extra deposition of fats. The line of treatment of *sthoulya* is described as *Nidan parivarjana* and *Apatarpana chikitsa*. In this case, extract of a herbal drug i.e *Vrikshamla* was selected which showed good results in the symptoms as well as complete normnancy of lipid profile.

A Case Report

A 46 years old male patient came to *Kayachikitsa* OPD of National institute of Ayurveda College, Jaipur, Rajasthan, India presented with the complaints of Weight gain, dyspnoea on exertion etc. since 6 months. Patient was thoroughly examined and detailed history was taken. Patient was a teacher by profession and have history of chicken pox and trauma over chest region (due to fall from hight) during childhood. Patient also have surgical history of

deviated nasal septum (DNS)-15 years ago.Patient was allergic to sunlight and smell of perfumes.

O/E

General Condition – moderate

Temperature- afebrile,

Pulse rate – 76/min. Regular.

Blood Pressure- 110/70 mm of Hg.

Investigation

Routine investigations such as complete blood count(CBC), Differential leucocyte count (DLC), ESR, Fasting blood sugar(FBS), Liver function test (SGOT & SGPT), Renal function test (Blood urea & Serum creatinine) were done. Patient was advised for lipid profile and diagnosed as dyslipidemia on assessment.

O/E

- *Kshudha aadhikya* (excessive hunger)
- *Pipasa aadhikya* (excessive thirst)
- *Kshudra swasa* (Breathlessness on exertion)
- *Gaurava* (Heaviness of body i.e Weight gain)
- *Atinidra* (excessive sleep)

ASSSESMENT CRITERIA

The effect of trial drug (Cap.Vrikshamla extract) will be assessed in Subjective, Objective & Laboratory parameters-

Subjective parameters

For subjective parameters following symptoms will be assessed:-

- *Kshudha aadhikya* (excessive hunger)
- *Pipasa aadhikya* (excessive thirst)
- *Kshudra swasa* (Breathlessness on exertion)
- *Sweda aadhikya* (excessive sweating)
- *Atinidra* (excessive sleep)
- *Dourbalya* (weakness)
- *Gaurava* (Heaviness of body)

- *Alasya* (letharginess)
- *Angasada* (sluggishness of body)
- *Kricchavyavayata*(difficulty in sexual intercourse)

All the above symptomatic assessment will be done by using Symptom Rating Scale as following.

Symptoms	Score
Absent	0
Mild (Irregular)	1
Mild (Regular)	2
Moderate	3
Severe	4

Assessment of Subjective parameters

Assessment of *Kshudha aadhikya(*Excessive hunger*)*

0 – becomes hungry after about 6hrs

1 – becomes hungry after about 4-5 hrs

2 – becomes hungry after about 3hrs

3 – becomes hungry after about 2-3hrs

4 – becomes hungry after about 2hrs

Assessment of *Pipasa aadhikya(*Excessive thirst*)*

0 – drinks abt 8-10 glass of water daily

1 – drinks abt 10-15 glass of water daily

2 - drinks abt 15-20 glass of water daily

3 - drinks abt 20-25 glass of water daily

4 – unable to have a sound sleep for his thirst

Assessment of *Kshudra shwasa(*Breathlessness)

0 – no shortness of breath

1 – mild dyspnoea after physical exersion relieved on rest

2 – moderate dyspnoea after physical exersion

3 – dyspnoea even after daily routine

4 – breathless even at rest

Assessment of *Swedaadhikya*(Exceesive sweating)

0 – normal perspiration

1 – mild perspiration after doing exertion

2 – increased perspiration after doing little exertion

3 – profuse perspiration after doing little exertion

4 – perspiration without exertion

Assessment of *Atinidra*(Excessive sleep)

0 – 6-8 hrs/day sleep

1 – 8-10hrs/day sleep

2 – 10-12 hrs/day sleep

3 – 12-14 hrs/day sleep

4 - >14 hrs/day sleep

Assessment of *Daurbalya* (General debility)

0 – Feeling of well being

1 – Tired after doing strenuous physical activity

2 - Tired after doing moderate physical activity but can perform daily activity

3 – Perform daily activity with difficulty

4 – Extremely tired to carry out daily routine activity

Assessment of *Gaurava*(Heavyness of the body)

0 – No feeling of heaviness.

1 – Occasional feeling of heaviness.

2 - Continous feeling of heaviness, but patient does usual work.

3 – Continous feeling of heaviness which hampers usual work.

4 – Unable to do any work due to heaviness.

Assesment of *Alasya* (Letharginess)

0- Normally active.

1- Hesitate to start work but once started complete it.

2- Start work but does not complete it.

3- Doesn’t have desire, works under compulsion.

4- Doesn’t start work.

Assesment of Angasada (Sluggishness of the body)

0- Absent

1- Occasional *Angasada*
2- Continous *Angasada* but not interfere any activity
3- Continous *Angasada* and sometimes interfere daily activity
4- Continous *Angasada* which hamper daily activity and confined patient to complete rest.

Assessment of *Krichchavyavayata* (loss of libido)

0- Absent
1- mild loss of libido
2- moderate loss of libido
3- severe loss of libido
4- complete loss of libido

Objective parameters

For Objective parameters following examinations will be do

- **BMI**
- **Body weight**
- **W. H. R. (Waist-Hip ratio)**

Laboratory parameters:

Routine Blood Investigation

-Hb%

-TLC

-DLC

-ESR

- **RFT- (**Blood urea & Sr.creatinine)
- **LFT-** (SGOT & SGPT)
- **Lipid profile** –(Sr.Total cholesterol,Sr.Triglyseride, & Sr.HDL)
- **Fasting Blood Sugar**

Treatment Given

Capsule *Vrikshamla* (Fruit extract)3 cap (each Cap. 500 mg.) twice a day before meal with lukewarm water were given for 30 days along with *pathya* and *apathya aahar* and *vihara*.

RESULTS

Assessment of Subjective parameters

Signs and symptoms	BT	AT
Kshudha aadhikya (excessive hunger)	4	2
Pipasa aadhikya (excessive thirst)	3	1
Kshudra swasa (Breathlessness on exertion)	3	1
Gaurava (Heaviness of body i.e Weight gain)	3	1
Atinidra (excessive sleep)	2	0

Objective parameters

Parameters	BT	AT
Weight (Kg)	92	85.7
Body Mass Index (BMI)	31.77	29.59
Waist- Hip ratio (WHR) in cm.	0.92	0.90

Laboratory parameters

Parameters	BT	AT
Routine Blood Investigation		
Hb%	15.0	15.0
TLC	6200	6500
DLC	1-Neutrophils-30% 2-Lymphocytes-47% 3-Eosinophils-19% 4-Monocytes-04% 5-Basophils-00%	34% 48% 15% 03% 00%
ESR	03 mm/hr	02 mm/hr
Renal Function Test (RFT)		
Blood urea	16.0 mg/dl	33.0 mg/dl
Sr.creatinine	0.8 mg/dl	0.8 mg/dl
Lipid profile		
Sr.Total cholesterol	240.0 mg/dl	188.0 mg/dl
Sr.Triglyseride	310.0 mg/dl	147.0 mg/dl
Sr.HDL	53.0 mg/dl	47.0 mg/dl
Fasting Blood Sugar		
FBS	89.0 mg/dl	77.0 mg/dl
Liver Function Test (LFT)		
SGOT	28.0 I.U/L	33.0 I.U/L
SGPT	24.0 I.U/L	28.0 I.U/L

DISCUSSION

In above case study, patient was suffering with *Santarpanjanya vikara* i.e. *sthoulya* which can be correlated with dyslipidemia and Obesity. Dyslipidemia is the condition which shows increased levels of lipids and lipoproteins in the blood. The condition shows involvement of mainly *asthayi medodhatu*, and *kapha* predominance with *Agnimandya* which leads to

production of *Ama*. *Rasadhatwagnimandya* directly leads *medodhatwagnimandya* which blocks proper formation of further *dhatus* are main pathological factors of *Medopradoshaja vikara* w.s.r. to *sthoulya*. To remove the root cause of the disease, the traditional *Ayurvedic* medicine *Vrikshamla* is an excellent representative in alternative and complementary medicines in a very natural way. The drug *Vrikshamla* is very useful for the management of *Medoroga* (obesity disorders) and cardiac problems as per *Ayurvedic* lexicons. Researcher believes that it exerts anti-hyperglycemic, insulin sensitization, islet protection, anti-dyslipidemic activities, anti-obesity and antioxidants in animal model systems, ultimately it results in metabolic correction and disease reversible effect. In this case study, *Vrikshamla* is presented as potent drug for the treatment of Dyslipidemia and obesity. The overall effect of therapy, patient got significant improvement in signs and symptoms and weight was reduced by 6.3 kgs, S.cholesterol, S.tryglycerides, were significantly reduced.

CONCLUSION

In this case study, we got significant results with herbal drug i.e Cap. *Vrikshamla* (extract). Regarding to treatment of dyslipidemia, the main target of *Ayurveda* is generalised but at subtle level it act at the level of *Medadhatu* alonge with it correct the functioning of *Bhutagni, Medo Dhatvagni, Medovaha Srotas, Ama & Vatadosa* and improves overall wellbeing. A very ideal example of such versatile action is *Vrikshamla*, which is described in *Ayurveda* for management of cardiac and certain other related problems. It having very good *Medonashana, Vatanashana* and *Agnideepaka* properties. Acoording to modern researchers *Vrikshamla* contains HCA which having very good effect on lipid metabolism and ultimately it reverses the disease condition. *Ayurvedic* drug V*rikshamala* is very good alternative to the parallel counter part and it can be used alone or as an adjuvent with conventional modern drugs. It is better, safe and natural alternative for the management of dyslipidemia. Ultimately *Vrikshamla* help to remove the vitiated *asthayi medodhatu* i.e. increased lipids and lipoproteins as well as helped to increase HDL Cholesterol which is a good cholesterol means regulated the proper formation for *Medadhatu* by relieving *medo-dhatwagnimandya* to bring equilibrium. Thus an attempt was made to provide safe and effective treatment to the patient.

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