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AN OBSERVATIONAL STUDY TO ASSESS THE LIPID PROFILE VALUES IN *MEDOSARA* PERSONS

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ABSTRACT

Dyslipidaemia is abnormally elevated cholesterol or lipids in the blood. It increases the chance of atherosclerosis, stroke, etc. It is a burning issue in front of society. **Methodology** This observational study is conducted at OPD of Ayurveda College, Coimbatore for one month period. *Medosara* persons were selected as per the questionnaire based on characteristic features described in Ayurvedic classics. Lipid profiles were carried out for these selected people. This study was undertaken to find out any relation between *Medosara a*nd lipid profile values. **The result** This observational study showed that there is a significant increase in lipid profile values in *Medosara* persons. The result was non-significant in triglyceride levels. **Discussion** In Medosara person's significant increase in HDL value is found. It is a good indicator of a healthy heart. Total Cholesterol and LDL values were also found to be significantly elevated in *Medosara* persons. From this study, we can conclude that if the diet and lifestyle are not adjusted properly there is a high chance of developing Dyslipidemia and related diseases in *Medosara* persons.

Keywords: *Medosara*, Lipid profile, Dyslipidemia

INTRODUCTION

Dyslipidemia is a burning issue in front of society due to changes in dietary habits & unhealthy life-styles.

The excellent qualities of a *Dhatu* which promote certain physical and socio-psychological characteristics in the body are collectively termed Sara *Purusha*

Lakshana[1]. The Sara is an important concept of Ayurveda that reflects the status of a particular *Dhatu* in a person and helps in developing the resistance against the diseases of that *Dhatu*. In present days diseases like obesity, hypertension, atherosclerosis, coronary artery disease, etc are increasing day by day which was earlier attributed to excessive lipids, particularly cholesterol. But now cholesterol is recognized as two types of high (HDL) and low (LDH) density lipoprotein, out of which HDL helps in preventing the above-mentioned serious diseases. *Snigdhata* or oilyness[2], which is the contribution of *Jala Mahabhuta* [3] is mainly related to *Meda-sara*. It promotes luster, complex (*Varna*), voice (*Svara*), vision *(Netra*), hair (*Kesha*) and *Loma*), nail (*Nakha),* teeth (*Danta*), lips (*Oshtha*), urine (*Mutra*), feces *(Pureesha*) and sweat (*Sveda*)[4]. *Medodhatu* can be correlated as lipids both stored and circulatory. As among circulatory lipids HDL is considered to be good cholesterol for health and is known to prevent above said diseases. In Ayurveda *Medo -Saara* represents the possession of all the good quality lipids (*Medas Dhatu*)for the promotion of health and preventing related diseases,

AIM

This study was undertaken to find out any relation between *Medosara* and lipid profile values.

METHOD & MATERIALS

1. Study Design: This is an observational study.
2. Study setting: This observational study is conducted at OPD of Ayurveda College, Coimbatore for one month period.
3. Study Population: *Medosara* persons selected as per the questionnaire based on characteristic features described in Ayurvedic classics.
4. Study sample: *Medosara* individuals fulfilling inclusions and exclusion criteria who consented to participate in the study were enrolled.
5. Sample size: The sample size for *Medosara* persons was taken 30.
6. Sampling Method: The survey method was used for the *Medosara* person.

Healthy persons living in Sulur were surveyed and their Sara was determined. The individuals showing *Medosara* were included in the present study for detailed investigation and to determine their lipid profile status. The lipid profile was taken from an accredited lab.

Inclusion Criteria:

 Healthy individuals

 16-35 years of age group

Exclusion Criteria: Persons suffering from

- Hypertension
- Diabetes Mellitus
- Endocrine Disorders
- Lipid disorders
- Congestive Cardiac Failure.
- Nephrotic Syndrome
- Acute or Chronic Renal Failure

Plan for the Study

- a proforma (containing 20 questions with a maximum score of 60) to assess *Medosara*
- The parameters studied were Lipid profiles.

Total cholesterol, HDL-cholesterol, triglyceride, LDL were observed.

Compared the status of lipid profile values with *Pravara, Avara*, and *Madhyama Medosara*

Assessment Criteria

Each individual was assessed for *Medo-Saara* symptoms by giving a suitable score for each symptom. A total score of 60 out of 40- 60 is taken as *pravara sara*, 20-40 is *madhyama*, and below 20 is taken as *avara medho saara*. On the basis of the score, they were divided into *Avara*, *Madhyama*, and *Pravara Medosara*.

Data analysis:

The correlation between the three categories of *medo sara* score and the lipid profile values was calculated by Pearson's correlation coeffient with the help of SPSS software.

Ethical consideration. Ethical clearance was obtained from Institutional Ethical Committee (IEC) at the college. Written informed consent will also be sought from individual study participants explaining essential components of confidentiality, privacy, voluntary participation, etc.

Observations and Results:

In the present series of 30 *Medosara* individuals, a maximum i. e 22% belonged to 26 years of age.

Most of the individuals i.e., 75% were male and 25% were female. The majority of the subjects (64%) were having the habit of taking mixed i.e., vegetarian and non-vegetarians diets, and the remaining subjects (36%) were pure vegetarians. The Mean height was 168.11cm ± 8.814 and the Mean weight was 64.4 ± 10.16.

The Mean BMI was 22.79 ± 3.05: Distribution of the individuals on the basis of their symptom scores showed that 50% persons of in this series were of *Pravara Medas* followed by 25 % of *Madhyama* and 25% persons of *Avara Medosara*. The mean values of each category *Medosara* group HDL, LDL, Total cholesterol, and triglyceride with statistical analysis of SD and SE obtained during the study for each category of *Medosara* are shown in Table-1, 2,3,4. It shows that there was a statistically significant linear correlation with HDL, LDL, Total cholesterol, and three types of *Medo Saara* individuals.

The result was non-significant in triglyceride level. (Annexure 1)

TABLE 1

Distribution of HDL according to three categories of *Medosara*

Medo sara	**Mean HDL**	**Standard Deviation (+ -)**	**Standard Error (+ -)**
Avara	44.2	0.84	0.37
Madhyama	49.6	5.59	2.5
Pravara	52.45	5.26	1.18

TABLE 2

Distribution of LDL according to three categories of *Medosara*

Medo sara	***Mean LDL***	***Standard Deviation (+ -)***	***Standard Error (+ -)***
Avara	85	6	2.68
Madhyama	89.4	3.78	1.69
Pravara	108.8	8.76	1.96

TABLE 3

Distribution of Total cholesterol according to three categories of *Medosara*

Medo sara	**Mean Total Cholesterol**	**Standard Deviation (+ -)**	**Standard Error (+ -)**
Avara	186.6	4.22	1.89
Madhyama	198.2	7.98	3.57
Pravara	202.45	9.94	2.22

TABLE 4

Distribution of Triglyceride according to three categories of *Medosara*

Medo sara	**Mean Triglyceride**	**Standard Deviation (+ -)**	**Standard Error (+ -)**
Avara	86.4	22.07	9.87
Madhyama	103.4	3.78	1.69
Pravara	99.1	17.95	4.01

DISCUSSION

Sara pariksha serves as an important diagnostic tool and is one among the ten types of method of examination under *Dasavidha Pariksha*. It primarily assesses the strength of an individual. In *Ayurveda Sara* comprises the essence of *Dhatu* hence called *"Vishuddhataro Dahtu".* It deals with the physical and psychological characteristics of an individual which proved to be helpful in deciding the strength of a person. *Dhatu sarata* is the reflection of *Dhatu sara* in the form of structure and functions. Thus, one should examine the individual with respect to *Sara* or the excellence of his *Dhatu*. In today's era of evidence-based Medicine and the growing popularity of *ayurveda* globally, the need is felt to provide modern parameters for everything we study. Various types of lipids are present in the human body, amongst which earlier cholesterol was considered responsible for many cardio-vascular diseases. But now two types of cholesterol are recognized viz. LDL and HDL; out of which High-density lipoprotein (HDL) is referred to as the 'good cholesterol' because it carries cholesterol and phospholipids from tissues and organs back to the liver for degradation and elimination. It prevents the deposition of cholesterol on the walls of arteries, by carrying cholesterol away from arteries to the liver[5]. Hence it helps in preventing many disorders caused by dis-lipidaemia. On the other hand, in Ayurveda, a person of *Medo-Sara* is considered to have *Medas Dhatu* of good quality which helps in the promotion of Health. In view of this, the present study was conducted to ascertain whether these two good things mentioned in the two medical sciences have got any relation. *Medosara* people have shown statistically rising HDL which is popularly known as good cholesterol. Low-density lipoproteins: It is considered "Bad cholesterol" because it carrier cholesterol and phospholipids from the liver to different areas of the body viz. muscle, other tissue, and organ such as the heart. It is responsible for the deposition of cholesterol on the wall of arteries causing atherosclerosis. A high level of LDL increases the risk of heart disease[6]. *Medosara* people have shown a statistically significant rise in LDL, which is popularly known as "bad cholesterol". Total Cholesterol and LDL values were also found to be significantly elevated in *Medosara* persons. From this study, we can conclude that if the diet and lifestyle are not adjusted properly there is a high chance of developing Dyslipidemia and related diseases in *Medosara* persons.

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Annexure 1

Correlations			
		sara	hdl
sara	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.003
	N	30	30
hdl	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.003	
	N	30	30
**. Correlation is significant at the 0.01 level (2-tailed).			

Correlations

		sara	ldl
sara	Pearson Correlation	1	.742**
	Sig. (2-tailed)		.000
	N	30	30
ldl	Pearson Correlation	.742**	1
	Sig. (2-tailed)	.000	
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		sara	tc
sara	Pearson Correlation	1	.536**
	Sig. (2-tailed)		.002
	N	30	30
tc	Pearson Correlation	.536**	1
	Sig. (2-tailed)	.002	
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		sara	try
sara	Pearson Correlation	1	.233
	Sig. (2-tailed)		.216
	N	30	30
try	Pearson Correlation	.233	1
	Sig. (2-tailed)	.216	
	N	30	30