

A REVIEW ARTICLE ON: MEDOVRUDDHI WITH RELATION TO HYPERLIPIDAEMIA

Dr. Suraj Prakash Rathod*¹ and Dr. Jayant D. Gulhane²

¹Associate Professor, kayachikitsa Department, Shri K. R. Pandav Ayurved College, Nagpur-

²Associate Professor and HOD, kayachikitsa Department, Government Ayurved College,
Nagpur

ABSTRACT

In *Ayurveda* it is mentioned that body is made up of seven types of tissues known as *Dhatus*. *Meda* is one of those *Dhatus*, which is necessary to maintain *snehatwa*. It can be correlated with lipids in modern science. *Vasa* and *Majja* also resembles with lipids. *Medo dhatu* play a very significant role in developing various metabolic disorders like obesity, diabetes mellitus which are already mentioned in *ayurveda* as *Sthaulya*, *Prameha* that occurs due to excessive *meda* or it can be called as *Medovruddhi*. In modern science the cause of lifestyle disorder is related to excessive deposition of fat in the body. This hyperlipidemia is correlated with *Medovruddhi* in *Ayurveda*. hyper lipidaemia is one of the major causes of cardiovascular disorders, since last two decades and it is result of modified lifestyle of a new era. Present study tries to correlate conceptual facts to show relation between *medo dhatu* and lipids.

KEYWORDS: hyper lipidaemia, *Medo Dhatu*, *Medovruddhi*, *Medoroga*.

INTRODUCTION

The group of naturally occurring molecules acting as structural components of all various membranes are called as lipids. It includes, fat soluble vitamins, waxes, sterols, fats etc. they all have the common property of *snehatwa* ⁽¹⁾ (lubricity). In *Ayurveda* it has been stated that body consist of *medo dhatu*, *vasa* and *majja dhatu*. They all have the same property of *snehatwa* which has been described in *Ayurveda*. So, lipids can also be correlated with these three factors. They all have the different sites n function, though they have common features ⁽²⁾. *Sneha* is very important for the body, but slightly disturbance in the proportions leads to the various disorders which can be state in the terms of *Rasagata Snehavruddhi* which leads to *Medovruddhi*. Hyper lipidaemia is listed one of the major lifestyle disorders which is defined as the increased level of serum one or more of cholesterol, LDL cholesterol, triglycerides or both total cholesterol and triglycerides that contribute to atherosclerosis ⁽³⁾.

Hyper lipidaemia are categorized in two types:

1. Primary Hyper lipidaemia
2. Secondary Hyper lipidaemia

Primary Hyper lipidaemia: It occurs due to genetic causes such as a mutation in a receptor protein

Secondary Hyper lipidaemia: Arises due to other metabolic disorders such as:

- Diabetes Mellitus,
- Liver disorders,

- Alcohol consumption,
- Obesity,
- Estrogen administration are the other precipitating factors

The main risk factor for ischemic heart diseases and coronary mortality is the hyper lipidaemia. By understanding the concept of lipid on the basis of *Meda* in Ayurveda, it is essential to modify lifestyle and follow the rules of diet and behavioral factors as per *Ayurveda*.

Concept of *Meda*

As per *Ayurveda* the main site of *meda* is *udara* but *mansa* and *brihat asthi* also consist some of its part. *Meda* which is present in *sthula asthi* (large bones) is called as *majja*. The pure form of *meda* which is present inside the *mansa (peshi)* is called as *vasa* ⁽⁴⁾.

So, all forms of lipids can be correlated with *Meda*, *Vasa* and *Majja*.

But from above all three *meda dhatu* has more importance as it is responsible for *medoroga* (hyper lipidaemia) and various metabolic disorders.

Medo Dhatu* is of two types- (a) *Poshak* and (b) *Poshya *Poshaka Medo Dhatu* is circulated in the whole body along with the *Rasa* and *Rakta Dhatu* to give nutrition to *Poshya Medo Dhatu*. *Poshya Medo Dhatu* is stored in *Medodhara Kala* which is immobile in nature. The site of *Medodhara Kala* is *Udara, Stana, Gala, Anu Asthi* and *Sphika*.

Factors which inhibit the metabolism of *Meda Dhatu*:

1. *Agni* is responsible for the carrying out all the metabolic activities which are happening in the body. It is only responsible for the *kshaya* and *vridhhi* of *dosha, dhatu* and *mala*. Due to *Agnimandya* (Diminished Appetite), food particles are not properly digested and lead to formation of *Ama* which further led to various metabolic disorders
2. *Ama* cannot be assimilated by the *Dhatu*s. This *Ama* causes hazardous effects according to their presence at different physiological levels
3. *Dhatu* didn't assimilate the nutrients from circulating *poshaka dhatu* due to *dhatwagnimandya*. So, such *Poshaka Dhatu* are abnormally collected in *Ahara Rasa* which is known as *Ama* and it further collected at different sites of body. This process is said as *Linatwa* of *Ama* in *Dhatu*s. So many disorders are caused due to this *Linatwa*
4. When the above pathology occurs with *Medo Dhatu* or when *Medo Dhatwagni* is impaired; the homologous nutrients present in *Poshak Medo Dhatu* will be in excess of circulation leads to excess accumulation of abnormal quantities of *Poshak Medo Dhatu* in *Rasa*. This condition can be turned to hyper lipidaemia.
5. *Medodhatwagni* cannot digest the *poshak medo dhatu* and cannot be assimilated into *Sthayi Medo Dhatu* by *Medo Dhatwagni* leading to excessive *Poshak Medo Dhatu* in circulation. Because which can lead to *Kaphavridhhi, Pittakshaya* or *Vataprakop* can lead to this condition ⁽⁵⁾.

Medovruddhi

Medovruddhi is a common term given to the disorder related to *medo dhatu dushti*. Abnormal deposition of *medo dhatu* is called on *medovruddhi*. Its excessive deposition in the body leads to the disturbances in metabolic activity and causes *agnimandya*.

to *agnimandya*, metabolism of food material is delayed due which accumulation of ama in the body occur, which leads to deposition of fat in the body which can be corelated with the *medo dhatu*.

Causes are as follows:

Dietary factors	Behavioral Factors	Genetic factors	Improper Therapeutic Application
Overeating Frequent eating, excessive <i>Madhur, Sheeta, Guru Ahara, Shleshma dravya Ahara, Ati Med Ahara</i> and <i>Ati Madya</i> (Liquors) <i>sevan</i> , excessive bakery products, etc	Daytime sleeping, lack of exercise, lack of thinking, exhitaration and sedentary habits are responsible for those. <i>Divaswap</i> .	These factors play important role in the development of <i>Medoroga</i> (Sthaulya) ⁽⁶⁾ .	<i>Santarpana</i> ⁽⁷⁾ (weight gain therapy)

Pathogenesis

Excessive production of *meda dhatu* leads to *margavarodh* and depletion of other *dhatu*s. Due to which provocation of *vayu* occurs which increase the false appetite which leads to excessive consumption of the food all this leads to excessive deposition of the *medo dhatu* ⁽⁸⁾.

Comparison Between *Meda* and Lipids

Sr. No.	<i>Meda</i>	Lipids
1.	Ingestion of excessive <i>Sneha (Ghrita, Tail, Vasa, Majja)</i> ⁽⁹⁾	Intake of high fat diet (ghee, oils, butter, etc.)increase body lipids
2.	Dietary intake of excessive <i>Madhur Dravya</i> causes <i>Medoroga</i> ⁽¹⁰⁾	Increase consumption of carbohydrates (specially sucrose enhances cholesterol level) ⁽¹¹⁾

Concept of Hyper lipidaemia

In *Ayurveda*, various scholars have their different opinions. Most of them compare hyper lipidaemia under the heading of *medoroga* and some consider it as *rasagata snehavruddhi* whereas some suggest under broad term as ama. So, all these conditions are somewhatsimilar. Hyperlipidemic condition cannot be directly refer to diseases.

Comparison Between *Medovruddhi* And hyper lipidaemia ⁽¹²⁾

	<i>Medovruddhi</i>	hyper lipidaemia
Etiological factors	<i>Avyayam, Diwaswapna, Medyanam Atisevan, Ati Varuni sevan</i>	Intake of high fat diet, junk food habits, oily food items, intake of excessive chickpeas. lack of exercise, genetic predisposition
Clinical feature	<i>Medo, Maans Ativriddhi, Flabbiness of buttocks, abdomen and breasts, loss of enthusiasm</i>	Excessive deposition of fats in abdomen, waist, buttock, etc. Excessive appetite, exertional dyspnea, excessive perspiration, general weakness
Complications	<i>Ayushya rhas</i> , loose and delicate body, <i>Javoparodh</i> , difficulty in mating, Weakness, Excessive sweating with bad odor, frequent thirst and hunger	Decreased life expectancy, Mechanical disabilities, loss of immunity, cardiovascular and cerebrovascular manifestations.

DISCUSSION

After studying the above of the facts, hyper lipidaemia can be correlated with *Medovruddhi*⁽¹³⁾. Acharya Charak didn't mention *Medovruddhi* separately but instead that he explained *Sthaulya* which is nothing but *Medoroga*. Acharya Madhava described *Medoroga* and its etiology ⁽¹⁴⁾. He explained abnormal deposition of *Medo Dhatu* in the body is termed as *Medovruddhi*. *Medodushti* includes several numbers of other *Medo Vikaras* which are collectively known as *Medoroga*⁽¹⁵⁾. Acharya Charak has described *Medovruddhi* under the heading of *Atisthaulya* and he explained *Atisthaulya* is due to the *dushti* of *Medovaha Srotas* and can be taken as synonym of *Medoroga*⁽¹⁶⁾. It can be stated that abnormal and unequal distribution or collection of *Medo Dhatu* in the body may be known as *Medovruddhi*. This theory is also supported by *Madhukoshkara*⁽¹⁷⁾ and *Bhavamishra*⁽¹⁸⁾ by describing individual chapter of *Medoroga*. *Madhavakar* has described the disease under heading of *Medoroga* in 34th chapter and has used *Medaswina*, *Atisthula* and *Sthula* words as synonyms ⁽¹⁹⁾. *Madhavakar* has mentioned the *Nidana*, *Rupa* and gave clear picture of *Medoroga*- borrowing all the thoughts of previous authors.

CONCLUSION

The condition which is characterized by hyper lipidaemia in the body can be considered under the concept of *Medovruddhi*. Etiological factors, signs and symptoms which lead to *Medovruddhi* are merely similar to that of hyper lipidaemia.

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