

## ROLE OF MEDOGNI KSHAYA IN STHAULYA

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Article Received on 19/07/2018

Article Revised on 09/08/2018

Article Accepted on 30/08/2018

## ABSTRACT

In *Ayurveda*, *Agni* maximally represent digestive and metabolic fire in the body. It is the substance secreted in body, which is directly responsible for chemical changes in the food. It consist of digestive (*Pak*) and different other hormones, enzymes and co-enzymes, which participate in digestive & metabolic functions. *Agni* is the invariable agent in the process of *Paka* (digestion, transformation). Ingested food is to be digested, absorbed and assimilated, which is unavoidable for the maintenance of life and is performed by the *Agni*. According to *Charak*, *Agni* has been divided into 13 types, i.e. *Jatharagni* – 1, *Bhutagni* – 5, *Dhatvagni* – 7 *Jatharagni* is the most important one, which digests four types of food and transforms it into *Rasa* and *Mala*. *Medo Dhatu* means fat tissue. *Medo Agni* is the factor that controls fat metabolism. If the *Medo Dhatvagni* or the tissue fire of fat gets weak or stronger than usual, it leads to a wide set of diseases which are again the root source for origin of many systemic illness like obesity.

**KEYWORDS:** *Agni*, *Dhatvagni*, *Medogni*, *Sthaulya*, Obesity.

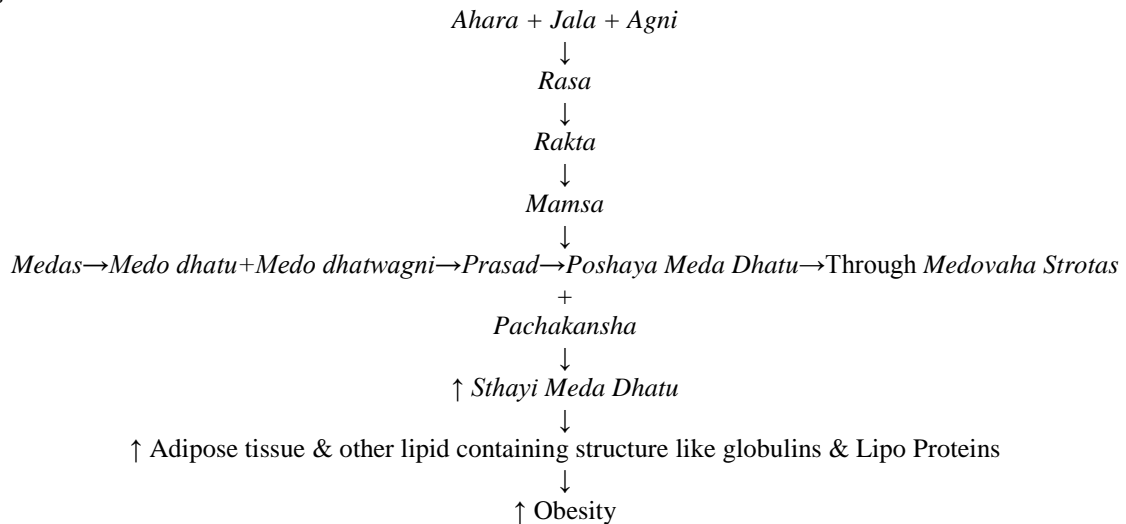
## INTRODUCTION

*Meda Dhatu* or fat tissue is one among the seven *Dhatus* (tissue) explained in *Ayurveda*. It is the 4<sup>th</sup> *Dhatu* (tissue) in the sequence and is formed from *Mamsa Dhatu* or muscle tissue. *Meda Dhatu* is the precursor of *Ashti Dhatu* or bone tissue. *Meda* is present mainly in *Udara*, but if it is present inside *Anu Asthi*, it is called *Sarakta Medas* and when in *Sthool Asthi* (large bone), the same is called *Majja*. The pure form of *Meda* present in *Mamsa* (*pesi*) is called *Vasa*. Thus all forms of lipids in body are present mainly in *Meda Dhatu* which has role in developing many metabolic disorders like *Medoroga* (Obesity), *Prameh* etc. *Meda Dhatu* means fat tissue, *Medo Dhatvagni* controls fat metabolism. If the *Meda Agni* or the tissue fire of fat gets weak or stronger than usual, it leads to pathological manifestations with increase or decrease in tissue fat. This in turn leads to a wide set of diseases which are again the root source for origin of many systemic illness like hypercholesterolemia, diabetes mellitus, obesity, neurological disorders etc.

*Meda Dhatu Vriddhi* (increase in fat tissue) - When the *Meda Dhatu Agni* is abnormally decreased or weakened. This generally correlates to and is in rhythm and accordance with the weakened *Jataragni*, which in turn has its influence on the other *Agnis* including *Dhatu Agni* (tissue fire of fat) which becomes impaired in the form of

its qualitative and quantitative depletion, also fails to metabolize and to convert the nutrients within the cells of the fat tissue. The local fat tissue proper is formed in an unripened form, the subsequent tissue i.e. bone tissue is not formed. The fat is neither metabolized nor mobilized from its sites, fat starts accumulating at every place and hampers the smooth functioning of other tissues and organs. Free fat which circulates in the blood stream, accumulates in the blood vessels and causes a lot of pathological conditions like hypercholesterolemia, hypertension, diabetes mellitus, heart diseases and many more. According to *Ayurveda* as it is said '*Medasa avruta margatvat pushyanti anye na dhatavaha*' i.e. when the fat accumulates in various channels of the body, it creates multiple blocks and slows down (depletes) the flow of nutrients from one part of the body to the other. As a result, other body parts are not nourished or enriched. Thus, fat grows and accumulates at the expense of other tissue. The compromised tissues cause various diseases. This *Medo Vriddhi* also manifests in various forms. They are as mentioned below.

## Medogni Structure



Like other *Dhatvagni*, *Medogni* has following three actions:

1. Small part of *Prasad Ansh* is formed by which next *Dhatu* is formed.
2. There is formation of *Sthool Ansh* by which self nutrition growth occur in body.
3. *Mala* is formed which is like *Sweda*. All the three *Ansh* mentioned above are created as the result from the work of *Medogni*.

Functions of *Medogni* can be correlated with the thyroxine hormone secreted from thyroid gland. Thyroid hormones are produced and released by the thyroid gland, namely triiodothyronine ( $T_3$ ) and thyroxine ( $T_4$ ). They are tyrosine-based hormones that are primarily responsible for regulation of metabolism. Thyroxine plays a crucial role over heart, digestive function, metabolism, brain development, bone health, and muscle control. It affects almost all body's systems, which means proper thyroxine levels are vital for health. Thyroxine decreases the fat storage by mobilizing it from adipose tissues and fat depots. The mobilized fat is converted into free fatty acids and transported by blood. Thus, thyroxine increases the free fatty acid level in blood. Thyroxine is essential for maintaining the body weight. Increase in thyroxine secretion decreases in the body weight and fat storage & vice versa. Hyperthyroidism is the condition that occurs due to excessive production of thyroid hormones by the thyroid gland. Sign and symptoms vary between people and may include irritability, muscle weakness, sleeping problems, a fast heartbeat, heat intolerance, diarrhea, enlargement of the thyroid gland, and weight loss. Symptoms are typically less in old age and during pregnancy. An uncommon complication is thyrotoxic crisis in which an event such as an infection results in worsening symptoms such as confusion, high temperature and often results in death. Decreased secretion of thyroid hormones is called hypothyroidism. Hypothyroidism leads to myxoedema in adults and cretinism in children. It can cause a number of symptoms, such as intolerance to cold, a feeling of

tiredness, constipation, depression, and weight gain. Occasionally, there may be swelling of the front part of the neck due to goiter. Untreated hypothyroidism during pregnancy can lead to delay in growth and intellectual power in the baby or cretinism.

As per Modern aspect, *Medogni* is one of the important/major *Pachakansh* which can be correlated with thyroxine hormone. This *Panchakansh* is formed in thyroid gland of body. Which goes through medium of *Rasa* and *Rakta* till *Meda Kosh*, this *Pachakansh* are influenced by the work of *Dhatu Paka*, Essentially all aspects of fat metabolism are also enhanced under the influence of thyroid hormones. Increased thyroid hormone level decreases the concentration of cholesterol, phospholipids and triglyceride in the plasma by eliminating them through bile. Decreased thyroid secretion greatly increases the plasma concentration of cholesterol, phospholipids and triglycerides and almost always causes excessive deposition of fat in the liver as well. This can be exactly understood by modern knowledge. If *Pachakansh* is deficient then it create barrier in bone development. Stunted growth, shot club like finger, deformed bones and teeth are less developed. If *Medogni* is in its normal stage then fat deposition is limited. Hairs, skin etc. are in moisture state. If *Pachakansh* is low then skin becomes dry, heat decreases with decrease in temperature. From *Meda Dhatu* of *Mand Dhatvagni* there is uneven deposition of fat, tongue & eyes comes out, goiter, weakness, loosening of muscles and formation of *Akarmanyata* & *Klaibta*.

On 15<sup>th</sup> day stable *Meda Dhatu* is formed. *Rasa* (plasma) gives to *Rakta* (blood) which produces *Mamsa* (muscle), *Mamsa* produces *Medas* (fat). The seven *Dhatu* of the body (body tissue) are enumerated. *Medo Dhatu* is 4<sup>th</sup> *Dhatu* and its function is *Snehana* (oleation or providing deposits). While situated stationarily in its own place, distributes its moisties (shares) to the *Dhatu*s. These "Fires" situated in *Dhatu*s fluctuate in accordance with *Jatharagni*. These fluctuations (increase or decrease) are

the cause for either increase or decrease of *Dhatu*. If the *Agni* or fire of the former *Dhatu* is functioning exactly, it contributes to the next *Dhatu* in exact proportion. As the development or processing of *Dhatu* is in progressive order, if a *Dhatu* undergoes depletion, the next *Dhatu* also undergoes depletion. If it is increased in quantity, the other *Dhatu* is increased automatically. (If the "Fire" of that *Dhatu* is exact).

System of *Meda Kshaya* are loss of sensation in the waist region. Enlargement of spleen, emaciation of the body. Due to loss of *Meda Dhatu*, spleen becomes palpable but it should be noted that spleen is not enlarged in this condition. Substance homologues to *Meda dhatu* i.e. heavy, oily, sweet food along with proper rest, oil massage are advised in *Meda Kshaya*. If *Meda Dhatu* is decreased there may be numbness of pelvic area, enlargement of spleen (or also liver) and wasting of other bodily organs and tissue. If *Medo Dhatu* is increased or aggravated or vitiated, it leads to tiredness and exertion even on minor physical activity, buttocks, breasts and abdominal tissues may be lax. Splenomegaly, numbness around joints, dryness, craving for non-vegetarian food are also the symptoms of *Meda Kshaya*.

## DISCUSSION

Concept of abnormal & unequal distribution or collection of *Meda Dhatu* in body can be inferred as *Medoroga*. According to *Acharya Charaka*, causes of *Medoroga* are *Medas* potentiating diet, *Harshnityatwat*, *Achinta*, excessive indulgence with *Brimhana Basti*, *Taila Abhyanga*, *Singdha Udvartana* and *Beejadosh*, whereas *Acharya Sushruta & Vagbhat* stressed mainly on endogenous causes including deranged function of *Dosas*, *Dhatu*, *Mala*, *Strotasa* etc. *Amadosha* is the cause behind *Medoroga* specially mentioned by *Vagbhat*. According to *Samanaya Visheshha Siddhant & Ashrayiashraya Sambandh* between *Dosha-Dushya*, there is direct relation between *Kapha*, directly leads to increment in the *Medas* proportion.

Modern Science states that hereditary cause, psychological disorders are also associated with overeating habits in such patient, leading to excessive calorie intake & then occurs *Medodushti*, ultimately all *Acharyas* have given nearly same pathogenesis in which *Kapha & Meda Dhatu* play vital role leading to *Medoroga*. Hence, these two are main *Dosha-Dushya Ghataka* in pathogenesis. Accumulation of *Kapha & Meda* leads to *Srotavarodha* causing trapping of *Samana vayu* in *Koshta* leading to *Avarana* to *Samana Vayu*. It leads to *Jatharagni Sandhukhsana* & increased *Jatharagni* leads to rapid digestion of ingested food & leaves the person craving for food. This vicious cycle continues resulting in *Meda Atiupachaya*. *Sushruta* has mentioned *Medoroga* as *Rasanimittaja Vikara* i.e. *Dushya* dominant disorder. According to *Ayurveda*, when food is ingested it is first acted by *Jatharagni* to form *Aahar Rasa*, thus *Ahara Rasa* acts as substrate for *Dhatuposhana* by respective *Dhatvagni*. *Dhatvagni*

*Mandya* develops when the substrate for *Medogni* i.e. *Meda Poshaka rasa* is present in excess form than the digestive power of *Medodhatvagni*. *Sushruta* says that the *Atisnehayukta Anna rasa* leads to excess formation of *Meda Dhatu*.

According to modern science, the digestion of fat starts in duodenum & pancreatic lipase is the main enzyme involved, thereafter resulting in the formation of free fatty acids & monoglycerides. So the pathology of dyslipidemia can be well correlated with *Ati Snehayukta Anna rasa*. The *Chikitsa* of *Medoroga* includes *Nidanaa Parivarjana*, *Samshodhana* and *Samshamana*.

## CONCLUSION

The Healthy & diseased condition of body depends upon *Agni* and due to its various activities necessary for life, it is considered as God. The increase (*prakopa*) and decrease (*shamana*) of various *Dosha* and *Dhatu* in the body depends on the status of *Agni*. Thus if one adamantly follows *Pathya* then he doesn't require any medicine. It clearly implicit the importance of *Pathya*, which mainly includes *Aahara*. If *Aahara* is taken in proper manner along with all rules & regulation, it sustains life, refreshes all sense organs, nourishes all *Dhatu*s, increases memory, intelligence, strength, *Oja* and gifts body with color & luster.

## REFERENCES

1. Agnivesa, Charaka Samhita, Text with English Translation by R.K. Sharma and Bhagwandas, Volume 2, Viman Sthana 5/3, published by Chaukhamba Sanskrit series, Varanasi 2009 page no. 171.
2. Agnivesa Charaka Samhita, Text with English Translation by R.K. Sharma and Bhagvan Das Volume 4, Chikitsa Sthana 15/15, publish by Chaukhamba Sanskrit Series, Varanasi 2009 page no. 10.
3. Agnivesa, Charaka Samhita, Text with English Translation by R.K. Sharma and Bhagwan Das Volume 3 Chikitsa Sthana 8/39, 2009 page no. 371
4. Agnivesa, Charaka Samhita, Text with English Translation by R.K. Sharma and Bhagwan Das Volume 4, C.S. 15/16, 15/17, 15/18-20.
5. Byadgi P.S. an insight into the understanding of Agni and its Clinical Importance. Int. J.Res. Ayurveda Pharma 2011 page no. 1637-1641.
6. Vadya Dash Bhagwan, concept of Agni in Ayurved with special Reference to Agnibala Pariksha.
7. A.V.S.S. Rama Rao – Biochemistry page no. 95, 130-133, 137-138, 295-296, 447.
8. Vagbhata, Asthanga Sangraha, Text English Translation notes indices etc, by prof. K.R. Srikanth Murthy Sutrasthana 19/20 Chaukhamba Sanskrit Series Varanasi 2009 page no. 10.
9. Monier William, Sanskrit- English Dictionary 2006 page no. 513.
10. Charak- Agnivesa volume 3 Chikitsa Sthan 15/1-2.

11. P.V. Sharma – Editor Sushruta Samhita of Sutrasthana – Chapter 21 verse, 10 Chaukhamba Vishvabharati.
12. Upadhyaya - Asthanghridaya of Vagbhata, Sutrasthan, Doshabhedeya Adhyaya chapter 46 verse 526.