

# The Conceptual Study on Medoroga

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**Abstract**— When all the Dhatus in the body are at their optimum levels, each of them contribute towards the Health of the body. But when there is vikruti in any of the Dhatus, whether it is Pramanataha or Gunataha, then it surely affects both the body and the mind. Medoroga is one of the best example of disease caused due to pramanataha vruddhi and Gunataha vruddhi of the dhatu. Medas is mentioned as one among the saptha dushya and is considered as prime dushya in context of different diseases like- Prameha, Medoroga, Sthaulya etc. Abnormal accumulation of Meda dhatu in body is known as Medo dushti. Medo dushti includes several Medo vikara, which are collectively known as Medoroga. Sthaulya can be included under Santarpanjanya vyadhi as "Medo roga". Medoroga is mainly due to imbalance of energy; intake is greater than output. In the context of Medoroga, 'Madhukosha' mentions sneha as the factor from which meda is formed. All the Dhatu nourish mainly by Sneha. Excess intake of sneha dravya leads to excess deposition of medas in the body. It is a condition caused by derrangement of Agni, leads to Amarasa, there is Medodhatvagnimandya leading to improper and excess formation of medo dhatu.

**Keywords**— Medo Dhatu, Medoroga, Sthoulya.

## I. INTRODUCTION

The word 'Medas' is derived from root 'Jhimida Snehana'. This stands for Sneha, Fat, oil etc. It means the substance which has snigdhatva property is called Medas. There are other dhatu which also have snigdhatva property such as Vasa, Majja etc. Meda is present mainly in Udara, but if it is present inside Anu Asthi, it is called Sarakta Medas and when in Sthoola Asthi, the same is called Majja. The pure form of Meda present in Mamsa (peshi) 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, Prameha etc. When Medodhatu is produced in excellent condition individuals is known as Medosara Purusha. The disturbance in Medo Dhatu metabolism is very common in present era because of increased cravings towards fast foods. Pancha mahabhuta involvement in Medo Dhatu are Jala & Pratvi Mahabhuta. Similar allied properties of Medo Dhatu may serve as a cause to the nutrition or vitiation of Kapha Dosha. Medo Dhatu and Kapha Dosha have Ashrayashrayee bhava.

## II. STHAULYA & MEDOROGA

Sthaulya, Medoroga and Medodosha have been described to be synonymous to each other. The term Medoroga was first used by Acharya Madhava to define obesity and related lipid complications<sup>1</sup>. Literally it means a disease in which Medo-Dhatu is deranged. It is only one type of disease according to Ayurvedic texts, but Adhamalla has tried to distinguish between two types of Medoroga; 1) Sthaulya: including its clinical features of Adiposity & 2) Lipid Disorders where Meda acts as an etiological factor in the genesis of other Diseases (secondary). The word Sthaulya is derived from the word 'Sthula' which means to grow or increase in size. In context of Sthaulya it refers to excessive growth of adipose tissue in body.

Acharya Charaka has described Sthaulya as excessive increase in quantity of Meda and Mamsa Dhatu leading to pendulous movements of Sphik, Udara and Sthana with morphological disproportion<sup>2</sup>. Such a person suffers from lack

of energy. In Ayurveda Meda also considered as prime dushya in context of different diseases like- Prameha, Medoroga Sthaulya etc. In the Metabolic Syndrome, the abnormal Meda, when deposited into subcutaneous tissue, it gives the clinical presentation of Obesity and similarly when Abaddha Meda extracted to Basti it creates the manifestations of Prameha, and when this Meda is unnaturally deposited in the arterial wall and increase the peripheral resistance (Dhamnipratichaya/arteriosclerosis), it shows clinical manifestation like Hypertension and when these unnatural Meda present in the Rakta-vaha srotas leads to increased level of unwanted fat level- Hypercholesterolemia. The formation of Meda not only depends on over consuming but also due to less utilization. The modern life style makes the human beings more comfortable. The basic concept of utilization of excess energy should be done through physical exercise but in this era, we prefer mental exercise than that of physical exercise. That is why it is rightly said by Sushruta- walking without rest for distance of hundred Yojana, one of the best remedies for Sthaula prameha<sup>3</sup>. So it is clear that proper exercise as well as low calorie diet may be one of the potent remedy for the particular state. Vagbhata is the first to describe the types of Sthula Purusha and has categorized them into (i) Heena Sthula, (ii) Madhya Sthula and (iii) Atisthula. He has considered Madhura Rasa over consumption leading to Sthaulya and has recommended Langhana therapy for Sthula person in Dwividha Upkramaniya Adhyaya<sup>4</sup>. He has stated that Medovridhi induces Sthaulya, Purvarupa of Prameha and complication related with various diseases of Sleshma, Rakta and Mamsa.

### A. Formation of Medo Dhatut

According to Charaka, the Rakta Dhatu is combined with Teja, Apa mahabhuta and is made solid by the Agni so that it gets converted into Mamsa, that again being digested by its own Agni (Medodhatvagni) and stirred up by the Agni and getting combined with the quality of Apa mahabhuta and Snigdha dravya and finally gets converted into the Medodhatu<sup>5</sup>.

There are three theories about the modes of dhatu formation.<sup>6,7</sup>:

#### B. Kshira-Dadhi-Nyaya

The law of Transformation: According to this concept, the preceding dhatu get transformed into the succeeding dhatu. This is on the analogy of transformation of milk into curd. Thus the whole Rasadhātu being cooked by the respective Agnis becomes Rakta dhātu similarly the Raktadhātu changed into mamsadhātu and Mamsadhātu changed into Medo dhātu and likewise, termed as Kshira - dadhi nyaya.

#### C. Kedari Kulya Nyaya

The law of transmission: According to this theory, the process of nourishment of dhatus can be related to the irrigation of different fields by water from a canal. The water first irrigates the nearby fields and only thereafter the distant ones are irrigated. Thus, the Rasa dhātu after supplying nutrition to the Rakta, it proceeds to provide the nourishment to Mamsadhātu. In this way, the nourishment take place to all the dhatus by Ahararasa and each dhatu can pick-up its own nutrients. According to this concept, one

dhatu alone can get nourishment without involving other dhatu.

#### D. Khale Kapota Nyaya

The law of selectivity: According to this concept, the nourishment of dhatus takes place by selection. The nourishing fluid travels to different dhatu through different channels. In the beginning, the nearby dhatu draws its nutrient fraction from the nourishing fluid and the distant ones get nourished at later stages. Thus, the nourishment of tissues takes place through different channels. This is on the analogy of the pigeons carrying grains from a thrashing field and flying out in different direction.

### III. STHANA AND SWARUPA OF MEDO DHATU:

There are 2 types of Medo Dhātu. One is Poshaka (nourishing) and second is Poshya (which get nourishment). Among these two, Poshaka Medo Dhātu is mobile in nature, which circulates in the whole body along with Rasa- Rakta Dhātu to give nutrition to Poshya Medo Dhātu. Second, Poshya Medo Dhātu is immobile nature, which is stored in Medodharakala. The site of Medodharakala is Udara and Anuasthi. Udara, Sphik, Stana are also depots of Poshya Meda. Medo Dhātu is also considered as a Sneha dominant Drava Dhātu which is having Guru, Snigdha properties and dominance of Prithvi, Apa and Teja Mahabhoota. As a result of Mamsagnipaka, it can be distinguished in the form of Sukshmabhaga which is responsible for the further transformation of the Medo Dhātu.

#### A. Pramana of Medo Dhātu

The total quantity of Medas is two Anjali and the Vasa is three Anjali. Thus, total Medas content of body is enumerated as 5 Anjali and total measurable body elements are counted as 56.5 Anjali. From this proportion, it is evident that total Medas content of body is 11 to 12% approximately. This quantity may vary from person to person and exact measurement of

body humorals is not possible due to unpredictable and ever changing nature of body<sup>8</sup>.

#### B. Functions of Medo Dhātu

According to Sushruta, Sneha, Sweda, Drudatva and Asthipushti are the functions of Medodhātu. Again Netra and Gatrasnigdhatā are the additional functions of Medas mentioned by Astanga Samgraha.<sup>9</sup> Snehana is the main function of Medo dhātu and with Sneha property, it helps to keep luster of skin, hair, eye, etc. Snigdha gatrata symptom of Sthaulya may arise through increased Snehana function of Medas. Another function of Medas is nourishment of further Asthi dhātu, Upadhātu Snayu and Sandhi. Snayu provides support to the Asthi and Sandhi helps in joint formation. In Sthaulya, over nourishment of only Medo dhātu cause malnourishment of all other dhatus including Asthi dhātu also.

Another function of Medas is creation of Sweda and Sweda is mentioned as mala of Medas<sup>10</sup>.

One more function attributed to Medas is Drudatva, which is possible with the help of Snayu. If Drudatva is taken as energy than it is great energy conserver, hence it is a great stabilizer which provides almost double energy than other two nutrients – carbohydrate and protein.

### IV. ASHRAYA AASHRAYEEBHAVA OF MEDAS

Dhātu, which is the shelter for any dosha of its allied nature, depicts the concept of Ashraya Aashrayeebhava.<sup>11</sup> Similar allied properties of homogenous Dhātu or Dosha may serve as a cause to the nutrition or vitiation of a Dosha or Dhātu and in this context, Medas can be considered as a location of the resident Kapha, since Medas plays a major role in nutrition or vitiation of Kapha and vice versa.

#### Medovaha Srotas

The internal transport system of the body is represented as Srotamsi. It has been given a place of fundamental importance in Ayurveda both in health and disease condition. Dhātu are nourished through their respective srotasas. The Medo Dhātu gets nutrition from the preceding dhātu i.e. Mamsa (Poshaka) through its own srotas called Medovaha Srotas. As per Dr. C. Dwarkanath, the channels through which nutrition to the adipose tissue is transported are to be termed as the Medovaha Srotas. Dr. Ghanekar B. G. considered the Medovaha srotasas as the capillaries of the perinephric tissue and Omentum<sup>12</sup>.

#### Moola of Medovaha Srotas:

Each and every srotas has two parts or endings. One is from which the srotas is originated i.e. the moola and another is through which the nutritive material travel to their respective places in the body. The Moola may be enumerated as:

Charaka	- Vrikka and Vapavahana
Sushruta	- Vrikka and Kati
Vagbhat	- Vrikka and Mamsa

Vrikka: One of the Kosthanga formed by the Saara of Rakta and Medo dhātu. There are two Vrikkas, situated in both the sides of the Mid-vertebro line inside the abdominal cavity.

Sharangadhara says that they nourish the Medo dhatu in Amashaya of the abdominal cavity<sup>13</sup>. While Charaka considered as “Moola”, so these structures must be directly related with fat metabolism. The upper part of the kidney - supra-renal gland, which control the secretion of epinephrine & non- epinephrine hormones actively participate in the break down process of the Triglycerides.

Vapavahana: It is also a Kosthanga and second root of Medovaha Srotas. Chakrapani has interpreted it as Tailavartika while Dr. Ghanekar has considered it as omentum, where the maximum Medas is stored.

Kati: Acharya Sushruta has clearly pointed out the exact site of the Kati but normally the Kati is the place where the fat accumulates.

Mamsa: Vagbhata has considered Mamsa as the moola of Medovaha Srotas. It is not easy to explain correctly. But we might have considered the Vasa (Mamsagata Sneha) below the skin

Pariñāma of Medas:

Agni is responsible for all metabolic activities of the body. It is solely responsible for any increase or decrease of Doṣa, Dhātu or Mala. The vitiation of Agni has serious impact on health at various levels depending on type of Agni involved. When Agni is decreased, it will lead to various metabolic disorders at various levels and produces “Āma” i.e., Agni fails to convert the Vijāṭīya Dravyas into Sajāṭīya ones and the end products cannot be assimilated by the Dhātus. Such products will be dangerous to body and can cause signs and symptoms according to their presence at various physiological levels. If Agnimāndya is present at the level of Jatharāgni only, then Āma is usually restricted to Koṣṭha. There will be no production of Āhāra Rasa & result will be Dhātu Kṣaya. If Agnimāndya is present at the level of Bhūtāgni, then Āma is restricted to Āhāra Rasa and this Āhāra Rasa which is improperly formed cannot be assimilated by Dhātus and results in Dhātukṣaya. If Agni-māndya is present at the level of Dhātvaṅni, then the particular Dhātus cannot assimilate nutrients present in the circulating Āhāra Rasa or circulating Poṣaka Dhātu. So, such Poṣaka Dhātus will be accumulated in Āhāra Rasa in abnormal quantities and they may further get accumulated at abnormal sites. This sort of process can be called as Leenatwa of Āma in Dhātus. Such Leenatwa can cause a number of disorders but it should always be kept in mind that once Jatharāgni is impaired, the Bhūtāgni and Dhātvaṅni would also be having impairment. Hence during treatment of any kind of Agnimāndya or Āma conditions, one should think about all the three levels. Such a way if Medo Dhātvaṅni is impaired and the homologues nutrients present in Poṣaka Medo Dhātu will be in excess in circulation and this can be referred to the conditions such as hyperlipidaemia. This is because the Poṣaka Medo Dhātu cannot be assimilated into Sthāyi Medo Dhātu by Medodhātvaṅni. The cause for excess Poṣaka Medo Dhātu in circulation is not only the Medodhātvaṅnimāndya, but there may be decrease in other Agni also. Any cause, which can lead to Kapha Vriddhi, Pitta

Kṣaya or Vāta Prakopa, can lead to this condition. In Medoroga, due to the excessive supply of Snigdha, Madhura, Guru etc. types of āhāra, the āhārasa contains excessive nutrition homologous to Medas. Due to persistent overload, the Medoagni is diminished leading to excessive accumulation of Medas in Āma form and thus causing Medoroga.

Ashta doshas of Sthoulya:

Ayushohrasa: Life expectancy decreased because of over production of Medo Dhatu at expense of other Dhatus. Therefore, other Dhatus cannot be nourished properly. Obesity leads to various co-morbidity conditions thereby decreasing the life expectancy of the obese person.

Javoparodha - The Shaithilya, Saukumarya and Guruta properties of Meda Dhatu causes Javoparodha. Thus these persons are slow to initiate the work.

Kricchavyavaya - Due to obstruction in genital passage by Meda Dhatu and less production of semen, the sexual act becomes difficult.

Daurbalya - This is because of the deranged metabolism owing to malnourishment of the Dhatus.

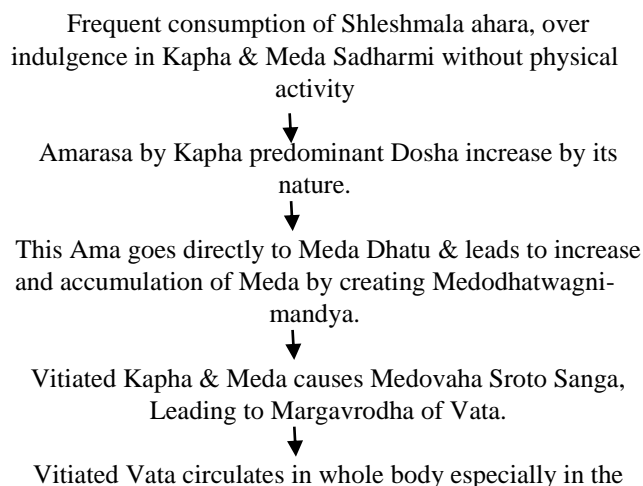
Daurgandhya - Bad smell results due to excessive sweating, innate quality of Meda Dhatu and morbid nature of vitiated Meda.

Swedabadha - On account of the admixture of Kapha with Meda, Vishyandi, Bahutva and Guru Properties of Meda and its inability to bear the strain of exercise, it results in Swedabadha.

Kshudhatimatrata or Pipasatiyoga - because of increased Agni in Koshta and vitiation of Vata by obstruction of Meda, it results in excessive appetite and thirst<sup>14</sup>.

Apart from other symptoms, Kshudra shwasa arises due to obstruction of Pranavaha Srotas by the accumulating Medodhatu. Excessive Meda Dhatu when obstructs various microchannels of body results in symptoms like Krathana, Gadgada Dhvani, Alpa Shukrata, Gatrāsada, Jadya and Sarvakriya Asamartha. Along with these symptoms, Purvarupa of Prameha also included as symptoms of Medoroga.

## V. SAMPRAPTI



Kostha, does Jathragni Sandhukshana which results in Kshudhaadhikya & Shighra Jarana of Ahara.



Medodhatwagni Mandhya

leading to the formation of Apakwa Meda which is incapable of nourishing the further Mamsa Dhatu.



The Ama Meda gets accumulated in Sarvanga especially in the Sphik-Udara-Stana Sthaulya.

(The time required to provide nourishment to Dhatu of whole body varies from one day, six days and one month. But in case of patients with Beeja Dosha, it is Khalekapota Nyaya which becomes effective)

#### VI. STHOULYA – NIDANAARTHAKARA ROGA FOR PRAMEHA

In sthoulya the path of Vayu will be obstructed by Medas and hence Vayu will get aggravated easily, that which is confined to Kostha (Saman vayu) resulting in the stimulation of digestive fire and consequently absorption of food. So the food digests quickly and individual becomes Voracious eater<sup>15</sup>. By this Medodhatwagni becomes more manda and puts pressure on its Medosthana ie Vapavahana, hence there will be relative insulin deficiency. On the other hand excessive increase of fat and muscle cause insulin resistance. So both insulin resistance and insulin deficiency shows the poorvaroopa of Madhumeha finally ends up in disease manifestation.

#### VII. DISCUSSION

Concept of abnormal & unequal distribution or collection of Medodhātu in body can be inferred as Medoroga. Charaka given causes of Medoroga as, Medas potentiating diet, Harshnityatwat, Achintanat, excessive indulgence with Brimhana Basti, Taila Abhyanga, Snigdha Udvartana and Beejadosh. Whereas Sushruta & Vagbhata stressed mainly on endogenous causes including deranged functions of Doṣas, Dhātus, Mala, Strotasa etc. Āmadoṣa is the cause behind Medoroga specially mentioned by Vagbhata. According to Samānaya Viśeṣa Sidhdhanta & Ashraya ashrayee Sambandha between Doṣa-Dushyas, there is direct relation between Kapha Doṣa & Medodhātu i.e. increased consequences of Kapha directly leads to increment in Medas proportion. All Acharyas have given nearly same pathogenesis in which Kapha & Medodhātu play vital role leading to Medoroga. Hence, these two are main Doṣa-Dushya Ghataka in pathogenesis. Accumulation of Kapha & Meda leads to Srotovarodha causing trapping of Samāna Vāyu in Koṣtha leading to Āvaraṇa to Samāna Vāyu, it leads to Jatharāgni Sandhūkṣaṇa & increased Jatharāgni 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 Rasanimitaja Vikāraa i.e. Dushya dominant disorder. According to Ayurveda, when food is ingested, it is first of all acted by Jatharāgni to form Āhāra Rasa, thus Āhāra Rasa acts as Substrate for Dhātuposhana by respective Dhātāvāgni. Dhātāvānimandhya develops when the substrate for Medodhātāvāgni i.e. Meda Poṣaka Rasa is present

in excess form than the digestive power of Medodhātāvāgni. Sushruta says that the Atisnehayukta Anna Rasa leads to excess formation of Meda dhātu. The three Acharyas have considered Vrikka as one of the moola of Medovaha Srotas but Vapavahana, Kati and Mamsa are mentioned as second moola separately.

Sushruta and Vagbhat have given more anatomical preference then the physiological point of view by considering Kati and Mamsa as “Moola” of the Medovaha Srotas. While Charaka’s consideration was a physiological one.

#### VIII. CONCLUSION

The Medo Dhatu plays an important role in two important functional aspects i.e. Dharana & Poshana of the body. Jatharagni is impaired, the Bhutagni and Dhatwagni especially Medo Dhatwagni is impaired resulting of the homologues nutrients present in Poshaka Medo Dhatu will be in excess in circulation and ultimately develops Medoroga. Lastly, Agni plays a very important role in growth, development & maintenance of the body. So the Agni should be maintained at equilibrium by changing the life style.

#### REFERENCES

- [1] Madhava Nidana, ed. Yadunandana Upadhyaya, with Vijaya rakshita - Madhukosha, 1980, chaukambha Sanskrit Orientalia, Varanasi, ref. 34
- [2] Agnivesa, Charaka Samhita, 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. (Kasi Sanskrit series 228), Sutra 23.
- [3] Susruta, Susruta Samhita, Varanasi: Krishnadas Academy; 1980. (Krishnadas Ayurveda series 51), Chikitsa 24.
- [4] Ashtanga Hridaya of Vagbhata with Sarvanga Sundari, commentary by Pt. Vaidya Lal Chand Shastri, Motilal Banarsidas, First Edition (Rep.1977).
- [5] Charaka Samhita by Agnivesha with Hindi Commentary by K.N.Shastri and G.N.Chaturvedi, Chaukhambha Vaidya Bhawan, Varanasi, 22nd Edition, 1996.
- [6] Charaka Samhita by Agnivesha with Hindi Commentary by K.N.Shastri and G.N.Chaturvedi, Chaukhambha Vaidya Bhawan, Varanasi, 22nd Edition, 1996.
- [7] Sushruta samhita with commentary of Dalhana by Priyavrit Sharma, Sushruta samhita Vol-I, Chowkhamba Sanskrit Series, Varanasi Publication eighth edition, 2005
- [8] Sushruta samhita with commentary of Dalhana by Priyavrit Sharma, Sushruta samhita Vol-I, Chowkhamba Sanskrit Series, Varanasi Publication eighth edition, 2005
- [9] Vagbhata, Asthanga Sangraha, Text English Translation notes indices etc, by prof. K.R. Srikanth Murthy Sutrasathana 19/20 Chaukhamba Sanskrit Series Varanasi, 2009; 10.
- [10] Agnivesa Charaka Samhita, Text with English Translation by R.K. Sharma and Bhagvan Das, Chikitsa Sthana 15/15, publish by Chaukhamba Sanskrit Series, Varanasi, 2009; 4: 10.
- [11] Introduction to Kayachikitsa by C.Dwarkanatha second edition 1986 published by Chaukhamba Orientalia, P.O. 1032, Varanasi.
- [12] Sushruta samhita with commentary of Dalhana by Priyavrit Sharma, Sushruta samhita Vol-I, Chowkhamba Sanskrit Series, Varanasi Publication eighth edition, 2005
- [13] Sharangadhara, “Sharangadhara Samhita”, Commentary by Prayagadutta Sharma, Chaukhambha Amar Bharati Prakashan, Varanasi, Khanda-1, (1988).
- [14] Agnivesha: Charaka Samhita, elaborated by Charaka & Dridhabala with the Ayurvedadipika Commentary by Chakrapanidatta, edited by Vaidya Yadavaji Trikamji Acharya, reprint ed. Varanasi: Chaukhamba Surbharati Prakashan; 2011. Sutra Sthana, chapter 21, verse 9, pp. 117.
- [15] Agnivesha: Charaka Samhita, elaborated by Charaka & Dridhabala with the Ayurvedadipika Commentary by Chakrapanidatta, edited by Vaidya Yadavaji Trikamji Acharya, reprint ed. Varanasi: Chaukhamba Surbharati Prakashan; 2011. Nidana Sthana, chapter 4, verse 8, pp. 213.