A CRITICAL REVIEW ON SROTAS DUSHTI IN MADHUMEHA (DIABETES MELLITUS)

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ABSTRACT

The human body (Sharira) is a conglomeration of the Srotas as per Ayurveda classics. Holistic science of Ayurveda is based on Doshas, Dhatu, Mala, Agni and Srotas etc. Srotas are the micro and macro channels of the body which provide platform for activities and circulation of Tridosh, Dhatu, Oja, Agni etc. In Ayurvedic classics the One of them being is Medovaha Srotas, which is related with Medo Dhatu. The distribution of adipose cells in human body is prevalent in subcutaneous tissue, omentum, kidney, skeletal muscles, liver and this reconfirms the Moolasthana of Medovaha Srotas (Vrikka, Vapavahan, Kati, Mamsa) described by Acharya Charak, Shushruta and Vaghbhata. The vitiation of this Srotas can leads to Sthaulya (obesity), Pramehanam Purvarupani (Prediabetes) etc. Premonitory symptoms of Prameha (Urinary disorders, Diabetes) are manifested when there is vitiation of Medovaha srotas. According to modern science, Pramehanam Purvarupani can be correlated with pre-diabetes. Pre-diabetes can be described as the condition in which person is on their way to developing diabetes mellitus. Major organ that can be damaged is kidney. Other organ like omentum likely plays an important role in metabolism process as
well. Etiopathogenesis of diabetes include kidney, omentum, metabolic disorder which shows its corelation with concept of existence of *Mulas* of *medovaha srotasa*, where origin or manifestation of its deviated states are seen. This study aiming for conceptual study of *medovaha sroto dushti* in *Madhumeha*.

**KEYWORDS:** *Madhumeha, Medovaha srotodushti, Prameha purvarupa, Pre-diabetes.*

**INTRODUCTION**

In ayurveda classics *Acharyas* mentioned that *Dhoshdhatumalamulamhi Sharira*, i.e., the basic constituent of human body is *Tridosha* (Vata, Pitta, Kapha), *Saptdhatu* (Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Sukra) and *Trimala* (Sweda,Mutra and Purish).[1] A vivid description of the anatomy of the human in terms of *Dosha, Dhatu, Malas, Srotas, Kostha, Kostangas* etc are given in Ayurveda classics. “Srotas” means “Sravanat Srotansi”, the term *Srotas* is etymologically derived from the Sanskrit root “sru sravane” which means to move, to flow, to permeate, to ooze, to filter, to exude, to secret, to leak etc.[2] *Srotas* are the inner transport system of the body which provides a platform for activities of another important biofactors like *doshas, dhatus, mala* etc. It has been given a place of fundamental importance in Ayurveda both in healthy and diseased condition.[3] *Acharya Charaka* has described 13 gross *Srotas*[4] while *Acharya Shushruta* has described 11 pairs of *Srotas*.[5] Some *Srotas* are told by both of *Acharyas*, one of them mentioned by both of *Acharyas* is *medovaha srotas*.

Vitiation of *Medovaha srotas* is caused by lack of exercise, daytime sleeping, eating luxurious, fat rich, fried and caloric foods in excess amount, excessive consumption of Varuni madya (fermented products).[6] The vitiation of this *Srotas* can leads to *Sthaulya*(obesity), *Pramehanam Purvarupani* (Prediabetes) etc.[7] Premonitory symptoms of *Prameha* (Urinary disorders, Diabetes) are manifested when there is vitiation of *Medovaha srotas*.

*Acharya Shushruta* also mentioned that Diseases, such as *Granthi, Vridhhi, Gala-ganda, Arbuda, and Ostha-prakopa* are due to the action of the deranged fat (*Medovaha srotas dushti*).[8]

*Prameha* is included among the eight major disorders in *Charaka Nidana*, shows the significance the disease was given by the seer.[9] It seems the disease was quite prevalent among the masses, also it was considered important in as much as it was incurable. Of late many comparisons have been made between *Prameha* – particularly *Madhumeha* with
Diabetes mellitus but the matter is yet to be settled. There are some similarities between the two as far as Etiological factors as well as clinical presentation and to some extent therapeutic aspects are concerned. However, the Ayurvedic concept of Prameha as a whole and Madhumeha in particular is difficult to understand.

**Srotas**

*Srotamsi* of the body comprise of channels of different kinds. They may be *Sthula* (gross, macroscopic) or *Sukshma* or *Anu* (subtle or atomic in size or microscopic). In general usage, the term *Srotamsi* comprehends all channels- big and small, perceptible and imperceptible- that compose the internal transport system of the body, as several of its important synonyms, furnished below will show.[10]

i. *Srotamsi* (Channels)
ii. *Siras* (Veins)
iii. *Dhamanis* (Arteries)
iv. *Rasayanis* (Lymphatics, ducts)
v. *Rasavahinis* (Capillaries)
vi. *Nadis* (Tubular conduits)
vii. *Panthanas* (Passages)
viii. *Margas* (Pathways, tracts)
ix. *Sharira chidras* (Body-orifices, openings, cavities)
x. *Samvrit samvritani* (Open or blind passages)
xi. *Sthanas* (Sites, locus)
xii. *Ashayas* (Repertories)
xiii. *Niketas* (Resorts)

The nomenclature mentioned above pertains to both the visible an invisible channels that afford passage to the movements of *Sharira dhatus*. In their colour and form they are stated to after the *dhatus* they transport; they may be cylindrical, either *Sthula* or *Anu*, *Dirgha* or *Prathana*.[11]

**Srotas bhed [types]:-** Different texts of *Ayurveda* classified Srotas as

<table>
<thead>
<tr>
<th>Acharya Charaka[12]</th>
<th>Acharya Shusruta</th>
<th>Ashtangharidaya</th>
<th>Sharangdhar</th>
<th>Kashyap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AntarmukhaSrotas</td>
<td>9 in male and 12 in</td>
<td>9 in males</td>
<td>9 in males</td>
</tr>
<tr>
<td></td>
<td>/YogyahiSrotas</td>
<td>female same as</td>
<td>male and 13 in</td>
<td>and 12 in</td>
</tr>
</tbody>
</table>
Medovaha srotas

Different Dhatu are nourished by their respective Srotas. Srotas which provide nutrition to medodhatu are called Medovaha Srotas. The channels through which nutrition to the adipose tissue is transported are to be termed as the Medovaha Srotas. As per Dr Ghanekar B G, Medovaha Srotas as the capillaries of the perinephric tissue and omentum.\[^{15}\]

The Medovaha Srotomoola means the organs which are closely related to Medodhatu functions or which are important sites related to the channels of Medodhatu from beginning or ending. Medovaha Moolasthana by different Acharaya are. Acharya Charaka - Vrikka and Vapavahan\[^{16}\] Acharya Sushruta - Vrikka and Kati\[^{17}\] Acharya Vagbhat - Vrikka and Mamsa\[^{18}\]

The three Acharyas have considered collectively that Vrikka as one of the moola of Medovaha Srotas but Vapavahaha, Kati and Mamsa are mentioned as second Moola separately. Preference given by Acharya Sushruta and Acharya Vagbhat is more anatomical than the physiological point of view. Acharya Charka consideration was a physiological one.

Madhumeha

Madhumeha is mentioned among the 20 types of Prameha in Ayurvedic texts.\[^{19}\] The name Prameha is self-explanatory which means 'Prabhuta Mutrata' (excessive urination) and 'Avil Mutrata' (turbid urination).\[^{20}\]

In Madhav Nidan it has been mentioned that "Prakarsena Prabhutam(Prachurana) Varam Varam VaMehati Mutratyagam Koruti Yasmine Roga Sah Prameha". The meaning of which is excess of urination with increased frequency and in the state of turbidity.\[^{21}\]
Incidentally, the term diabetes has been derived from the Greek term "Diabainein" which means "to cross through a siphon" meaning the continuous free flow of the water and applied to mean the elimination of a large quantity of Urine. 

**Samprapti of madhumeha**

<table>
<thead>
<tr>
<th>Srotasa</th>
<th>Involvement of Rupa and Purvarupa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutravaha</td>
<td>Avilmutrarta, prabhuimutrata</td>
</tr>
<tr>
<td>Medovaha</td>
<td>Most of purvarupa are due to medovaha srotasa dushti.</td>
</tr>
<tr>
<td></td>
<td>e.g., dantadnam, maladhyatva, snigdha-picchhila-guru gatrata, daurgandhya, medososa, angabheda, dehe cikkanata etc.</td>
</tr>
<tr>
<td>Mamsavaha</td>
<td>Putimansa pidaka, kaye malam</td>
</tr>
<tr>
<td>Udakavaha</td>
<td>Mukha-talu-kanthsosa, pipasa, pindikodwesthana</td>
</tr>
<tr>
<td>Svedavaha</td>
<td>Putimansa pidaka, kaye malam</td>
</tr>
<tr>
<td>Rasavaha</td>
<td>Gaurav, alasya, aruchi, mandagni, asyamadhurya, srama, arasajnata, krsangata, klaibya, sthlaulya.</td>
</tr>
</tbody>
</table>

Madhumeha is a disease in which the patient passes a large quantity of Kashaya (astringent), Madhura (sweet), Ruksha (dry), and Pandu (greyish and white) urine similar to the characters
of Madhu (honey) and the body too attains sweetness.[23] The term Madhumeha is composed of two words i.e., "Madhu" and "Meha". The word "Madhu" is specially used here for showing its similarity in respect of color, taste, etc. like Madhu, word “Meha” literally means for passing urinate.

CONCLUSION

Medovaha Srotas plays an important role in the transudation of nutrients essential for metabolism of Meda Dhatu also the transportation of the transforming Meda Dhatu. When Meda Dhatu is produced in excellence (both qualitatively and quantitatively), the individuals are known as MedoSara Purusha. in Medovaha srotas vitiation by any cause leads to pathogenesis manifested as metabolic disorder in the body. Probing into the main features of morbidity of Medovaha srotas shows the involvement of hormones responsible for lipid or fat metabolism in abnormal levels. Thus, medovaha srotodushti can be corelated to recent growing concern about metabolic syndrome. The treatment principles to be adopted in the morbidity of Medovaha srotas is explained as Sthoulya chikitsa by Acharyas.

In medovaha srotodushti, Abaddha Meda extracted to Basti it creates the manifestation of Prameha and similarly when the abnormal Meda, deposited into subcutaneous tissue, it gives the clinical presentation of obesity (sthoulya) and when this Meda is unnaturally deposited in the arterial wall, increase the peripheral resistance or arteriosclerosis (Dhamnirpticchaya) it shows clinical manifestations like hypertension and when these unnatural or vitiated Meda present in the Rakta Vaha Srotas leads to increase level of unwanted fat level – hypercholesterolemia.

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