

## BASICS OF MEDOVAHA SROTAS AND CHILDHOOD OBESITY – AN AYURVEDIC REVIEW

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### ABSTRACT

The concept of *srotas* is unique contribution in the understanding of Anatomy of human body. Ayurvedic classics described micro and macro channels for transportation, transfusion, secretion (*Sravanam*), etc is called *srotas* (channel), these *srotas* carry *dhatu* (tissue elements or their constituent) undergoing transformation to their destination. Briefly *srotas* are the channels which are dominated by *AakashMahabhut*, through which *PoshakDhatu* pass to form *SthayiDhatu*. One of them is the *Medovahasrotas* which is related to *Medodhatu* formation and *Poshan*. *Mulasthana* is the area from which *Srotas* evolves or arises. *Vrikka*, *Kati*, *Vapavahan* and *Mansa* are described as the *Mool* of *Medovahasrotas*. *AacharyaSushruta* mentioned *ViddhaLakshanas* of *MedovahaSrotas* e.g. *Pipasa*,

*Sthaulya*, *Shopha*, *Snigdhata* etc. If *Medovahasrotas* is vitiated it will cause *MedoDushti* which may be expressed as either *Prameha* or *Sthaulya* and in the present era they are compared with the Diabetes and Obesity respectively. Obesity is one of the “*Medoroga*” excess fat accumulates in body. Obesity (*Sthaulya*) may leads various adverse effects such as; *Swedadhikya*, *Mandotsaham*, *Madhumeha*. It is serious medical condition that occurs when a child is having more weight for his/her age and height. Medical Science and WHO considered child obese if body mass index is 30 kg/m<sup>2</sup> or more. Childhood obesity is also a very common problem among children in current scenario. In present era both parents are working, to earn the luxuries and amusements, so the kids are left with the food packets at home with idiot boxes to see some “de-shaped” cartoons resulting in the reduction of healthy nutrition and reducing their body activity. Environmental factors, genetic factors, disturbed lifestyle & presence of other diseases increasing prevalence of childhood obesity world

widely. In this *Meda&MansaDhatu* are involve. *Ayurveda* suggested that conduction of *Ahar-Vihar*, use of drugs, *Yoga* and *Panchakarma* therapy can effectively manage child's obesity and break the *samprapti*.

**KEYWORDS:** *Ayurveda*, *MedovahaSrotas*, *Sthaulya*, Childhood Obesity, *Medoroga*.

## INTRODUCTION

*Ayurveda* mentioned that “*DoshdhatumalamoolamhiShariram*” i.e. the basic constituent of human body is *Tridosha*, *Saptadhatu* and *Trimala*. This basic constituent is continuously circulating through different channels or carries in our body.<sup>[1]</sup> These transportation system of body are known as “*Srotas*”. There are total eleven numbers of *Srotas* described in *SushrutaSamhita*.<sup>[2]</sup> *Srotas* has been called as channel which is different from the *Sira*, *Dhamani* and having *Mulasthan* & dispersing in body.<sup>[3]</sup> In which *MedovahaSrotas* is one of them has more clinical importance now-a-days because it plays a significance role in developing many metabolic disorders like *Sthaulya*, *Prameha* etc. and there is high prevalence of these diseases in developed as well as developing countries in present time.

The channels through which nutrition is transported to *MedoDhatu* are termed *MedovahaSrotas*. It is learnt that any impairment of *medovahasrotas* does affect the other *dhatu*s. Most of lakshana stated in *Medovridhhi* or *Kshaya* involves other *Dhatuvridhhi* or *kshayalakshana*. Thus, vitiation of *MedovahaSrotas* results in a vicious circle involving other *dhatu*s, needless to say about the *doshas* resulting in an array of diseases, hence the study of *MedovahaSrotas* becomes important. The *Mulasthan* of *MedovahaSrotas* described by *Aacharya* are -*Vrikka*, *Vapavahan*, *Mansa* and *Kati*.<sup>[4]</sup> The vitiation or an injury to the *Srotas* may inflict their *Mulas* and treating the *Mulasthan* of respective *Srotas*, the disease will be cured.<sup>[5]</sup>

In *Ayurveda*, *Brihatrayi* and *Laghutrayi* have described obesity as *Sthaulya*. *Sthaulya* is *Medoroga* (a disorder of *medadhatu*), *Santarpanajanyavikara*.<sup>[6]</sup> *Acharya Kashyapa* has considered *Sthulya* as one of the *aprashasta* (not appreciable) *sharira* during explaining the anthropology. WHO defines childhood obesity as one of major public health problem of 21<sup>st</sup> century.<sup>[7]</sup>

Obesity means excess accumulation of fat in body.<sup>[8]</sup> In childhood period if child is significantly overweight for his/her age and height, which can be estimated with the help of

BMI and decide he/she suffers from childhood obesity. Excessive consumption of *Guru, Snigdha* and *MadhuradiAhar* along with indiscipline life style increases *Medas&Sthaulyam* occurs. In this, *Meda&Mamsa* accumulated which leads *Sthaulya* characteristically involve excess growth of hips, abdomen and breast. This is *Kapha* predominant *Vyadhi*.<sup>[9]</sup> So, vitiation of *Kapha* also leads to vitiation of *Medadhatu*. In this disease, the excessive production of abnormal *Meda Dhatu* is clearly visualized. The main culprit in pathogenesis of *Medoroga* is *Kapha* and *Meda*. Therefore, the first line of treatment is considered to restrict the excess production of *Kapha&Meda*. Also *Dinacharya* explained in various *samhitas* is not follow properly now days. Hence, need to told the importance of *Dinacharyapalana* in day to day life.

## AIM AND OBJECTIVES

1. To study the concept of *Medovaha Srotasa* through the *Samhita Granthas*.
2. To study the Childhood obesity by Ayurvedic view.

## MATERIAL AND METHODS

The material is collected from the - Classical text of *Ayurveda*, *Samhitas*, Modern Literature, Previous research works, Journalsetc.

## REVIEW OF LITERATURE

### • *MedovahaSrotasa*

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. *Dhatuare* nourished through their respective *srotasas*. The *MedaDhatu* gets nutrition from the preceding dhatu i.e. *Mamsa (Poshaka)* through its own *srotas* called "*MedovahaSrotas*". This are macro and micro channels of circulation; the healthy and diseased condition of the body depends on proper structure and function of these channels.

### • *Moolasthan of Medovaha Srotasa*

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.

<i>Acharya</i>	<i>Moolasthan</i>
<i>Charaka</i>	<i>VrikkaandVapavahan</i>
<i>Sushruta</i>	<i>Vrikkaand Kati</i>
<i>Vagbhat</i>	<i>VrikkaandMamsa</i>

1. **Vrikka**—One of the *Koshthanga* formed by the *Saara* of *Rakta* and *Medodhatu*. There are two *Vrikkas*, situated in both the sides of the Mid-vertebro line inside the abdominal cavity. *Acharya Sarangadhara* says that they nourish the *Medodhatu* in *Amashaya* of the abdominal cavity.<sup>[10]</sup>
2. **Vapavahana**- *Vapavahana* is explained as “*udarasthasnigdhavartika*”. Modern science explains omentum as large peritoneal folds attached to the stomach that acts as storehouse of *medas*.
3. **Kati**—*Kati* is the region where large amount of fat deposition occurs.
4. **Mamsa**—*Acharya Vagbhat* has considered *Mamsa* as *Moolasthan* of *Medovaha Srotas*. The probable reason may be due to its physiological role. Muscles, especially the skeletal muscles are known to store fat.

The channels which give nutrition to the *Medodhatu* or the vessels carrying the nutritive material up to the site of *Medodhatu* can be considered as *Medovaha Srotas*.

- **Function of Medodhatu**

<i>Acharya</i>	<b>Function</b>
<i>Charaka</i>	<i>Asthi Pushti</i>
<i>Sushruta</i>	<i>Sneha, Sweda, Dradhatva and Asthi Pushti</i>
<i>Ashtang</i>	<i>Sneha, Sweda, Dradhatva, Asthi Pushti, Netra And Gatra Snigdhatva</i>
<i>Bhavprakash</i>	<i>Sneha</i>
<i>Ashtang Hridya</i>	<i>Sneha</i>

- **Vitiation of Medovaha Srotas**

Absence of physiological activity, *Divaswapa*, Excessive fatty diet, food which increase *Kapha* are some of the risk factors that vitiates the *Medovaha Srotas*<sup>[11]</sup> and this leads to manifestation of the *Ashtauninditiyapurush* (*Atisthula, Atiruksha, Atiloma*....etc.)<sup>[12]</sup> while the injury to *Mool* of *Medovaha Srotas* develops *Swedaangamanam, Snigdha Angatta, Talu Shosha, Sthulata, Shophata, Pippasa*.<sup>[13]</sup>

- **Medovahasroto Dushti and Sroto Viddha Lakshana**

*Acharya Charak* has described *Srotodushti Lakshana* while *Acharya Sushruta* has explained *Srotoviddha Lakshana*.

<i>MedovahasrotodushtiLakshana</i>	<i>MedovahasrotoviddhaLakshana</i>
<i>Ashtanindita Pramehapoorvaroopam</i>	<i>Swedagmana</i> (Excessive sweating) <i>Snigdha</i> (Oily skin/organs) <i>Talushosha</i> (Dry mouth) <i>Sthaulya</i> (Obesity) <i>Pipasa</i> (Thirst) <i>Shopha</i> (Inflammation)

### CHILDHOOD OBESITY (*STHAULYA*) AND AYURVEDA

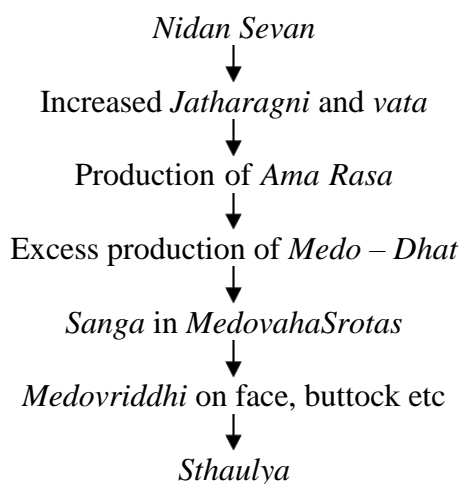
In *Ayurveda*, it is the *Santarpanjanya Vyadhi* which occurs due to the vitiation of *MedovahaSrotas*. Obesity begins with the imbalance of *Vata* and *Kapha Doshas*, *Rasa* and *Meda Dhatus*, *Agni*, *Srotas*. This imbalance further interferes with the formation of tissue or *dhatus* & leads to the tissue imbalance as overweight.

The main causes of *sthaulya* behind are intake of *Madhura*, *Sheeta*, *Snigdha*, *Guru aahara*, *atiaahara*, *Avyayama*, *Divaswapna* and *beejadodha* etc.

With day to day changing lifestyle, Child prefers to play with electronic devices like mobiles, computer etc. rather playing outside. Also in present era, both parents are working, so the kids are left at home with packing food packets with TV to see “deshaped cartoons” resulting in the lack of healthy nutrition and body activity. Also some child take rest after eating the meal, this is the major reason of the obesity.

*KaphavardhakaAahara*, *Vihara* and *Manasikahetu* further leads to the Obesity i.e. *Sthaulya*.<sup>[14]</sup>

- ***Samprapti*** –



- **Measure of Obesity<sup>[15]</sup>**

1. BMI is a good indicator of obesity. (BMI = Weight in kg/ height in meter<sup>2</sup>)
2. Normal range in Adults – 18-25
3. In children corresponding figures may be 15-22.
4. For children – (BMI ranges) – Overweight - >22  
Obesity - > 25

- **Clinical Features**

1. Obstruction of *srotas* by *Kapha* and *Meda*, worsens the condition as remaining other *dhatus* do not receive sufficient nourishment resulting in poor strength and stamina of the body resulting in decreased activities like walking, exercise, playing outdoor games etc.
2. Anthropological parameters like weight, height, mid arm circumference are excess to their normal range.
3. Obese child becomes incapable of all activities due to collection of fat in certain body parts – buttocks, breast, face, waist, abdomen etc and becomes large in size and becomes bulky and pendulous.
4. Restricted body movements, increased sleep hours, excessive hunger, laziness, decline immunity etc.

- **Complication of Obesity – By Ayurveda,**

1. *Pramehanampoorvarupani*
2. *Kasashwasadin*
3. *VatajanyaRoga*
4. *Daurbalya, Sukumarata.*

- **Management of Childhood Obesity**

1. **NidanParivarjana** – The *nidan – parivarjana* is the best way for reduce weight. So all cause which produce obesity should be avoided.
2. **Ahara** – *Madhura, Sheeta, Snigdha, Guru ahara, Atiahara* should be avoided. *Avyayama* and *Diwaswapna* after intake should be avoided. Fiber-rich fruits and food are beneficial for obese person. E.g. salad, papaya, apple, pulses, *yava*, wheat, *mudga* etc., Water should be recommended before meal, Oily and fried food, fast food and heavy food should be avoided.
3. **Anupana** – Luke warm water, honey, *trifalakwath* with honey, *takra, tilataila* etc.
4. **Vyayama** – Children should not perform very tough exercise but the exercise should be

done in the form of physical activities like outdoor games, swimming, running should be encouraged.

5. *Nidra*– Day time sleep, excessive sleep or sleep just after meal should be avoided., however appropriate sleep about 7-8 hrs. required to get all beneficial effects of *nidra*.

## 6. Specific Ayurvedic Treatment

- Ayurveda also mention various therapeutic and prophylactic measures for the management of childhood obesity
- Ayurveda mentioned *Langhana* therapy for *Sthaulya*
- *Panchakarma* therapy play significant role in controlling obesity i.e. Basti since it pacify *Vata* which play role in *Samprapti* of *Sthaulya* .
- *Lekhan Basti* may be used in *Sthaulya*
- Drugs – *Laghu*, *Ruksh*, *Tikshna Guna*, *UshnaVirya*, *Katu vipak*, *Kapha- Vatahra*, *Deepana-Pachana* and *Sroto-Shodhaka* properties offer relief in *Sthaulya*. *Dravya* having *shodhan* properties helps to open block of *Srotas* and controlled the disorder
- Ayurveda also believed that the consumption of water before meal and after meal may produce *KarshaSharira* and helps to prevent *Sthaulya*<sup>[16,17]</sup>

## DISCUSSION AND CONCLUSION

In Ayurvedic classics *Acharyas* have described *MedovahaSrotasa* and their particular *MulaSthana*. *Mula* of *srotas* is the storage site or origin site of *srotas* and injury to any *Srotas* or the root of any *srotas* leads dysfunction or *vikriti* of this *srotas*. By all above information it's shows that *Srotas* is the aspect defined as transporting passages of *Dhatus* undergoing transformation. *Aacharya* also mentioned the *viddhalakshanas* and *Srotodushtilakshans* of *medovahasrotas* . The vitiation of *Medovahasrotas* results in a disturbance of other *dhatus* also; Hence to study the *Medovahasrotas* is important.

*Ayurveda* mentioned obesity as *Medoroga*, involve imbalance of *dhatus* with disturbance of *Agni* and *Srotas*. As per modern science disturbed lifestyle and diet habits causes excessive fat deposition in body.

Obesity is a lifestyle disorder and have numerous treatment options in modern system of medicine but they reduce the patient weight. Decides in Ayurveda we can treat them on Ayurvedic principles which is not only reduce weight but also maintain forever. Ayurveda explain the therapies for the treatment of *Staulya* like. *Nidanaparivarjana*, *Aahara*, proper sleep, *Anupana*, *Vyayama*, increase physical activities, *Dincharyapalana* is also effective



which helps for loose weight in obese patient, also some drugs i.e. *Samshodhana* and *SanshamanaChikitsa*.

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