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## A Review of Obesity and its management in Ayurveda

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#### ABSTRACT

Ayurveda is originated from the Atharvaveda and was preached by Lord Brahma. Its Prayojana is to maintain the health of healthy and to cure the diseases of diseased. In Ayurveda, Sthaulya has been described in all the literatures. Acharya Charaka has described Sthaulya Purusha mong one of the Ashta Nindita Purusha. Sthaulya is caused due to Medovriddhi which includes abnormal and excessive accumulation of Medodhatu in the body. This is caused by frequent and excessive intake of Madhur and Snigdhaahara, lack of physical and mental exercises. These all results into the increase in Kapha Dosha and Medo Dhatu results in the Sthaulya. In modern science, Sthaulya can be compared to the obesity. Obesity is one of the metabolic disorder. WHO considers obesity as a Global epidemic and a public health problem. It is estimated that more than 300 million adults are obese and many are overweight. Sthaulya (obesity) is discouraged by the society for social as well as on the medical grounds. Three main causes have been described in modern literature viz. Dietetic, Genetic and Hormonal. Person of every age and sex is suffering by this widely spreaded epidemic i.e. obesity. It is the major chronic disease in developing as well as in developed countries. The line of treatment includes the treatment of Dhatvagnimandya. In pathogenesis of Sthaulya, Kledaka Kapha, Samana and Vyana Vayu, Meda (fat /lipid) and Medodhatvagni Mandyata are main responsible factors. So the proper treatment should be selected, that can effect on all these factors.

Key words: Medodhatu, Obesity, Sthaulyata, Sthaulya Chikitsa.

#### **INTRODUCTION**

In modern era, Every person is very busy in his daily routine. No body have time to think for the healthy life. None of usfollow *Dinacharya* and *Ritucharya* even after knowing the importance of it. Due to this artificial living life-style, person is suffering from various life style disorders. *Sthaulya* is one of them. *Sthaulya* is a condition where there will be

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Atyaopchaya of Shareera associated with abnormal increase in Medodhatu. Sthaulya is one of the most effective disease which affects someone social, physical and mental features. Acharya Charaka<sup>[1]</sup> listed eight defects underlying Sthaulya Purusha - Ayuhrasa, Javopradha, Alpa-Vyavayita, Daurbalya, Daurgandhya, Swedabadha, Ati-trisha, Ati-kshudha. The patients are looking towards Ayurveda with a great hope as other system of medicines has merely insufficient management for this. Management of obesity (Sthoulya) is becoming a challenging problem for healthcare professionals, patients and their families. According to W.H.O. Obesity is listed under the 10 top selected risks to the health disorders.

#### LITERATURE REVIEW

#### Sthaulya

A person having pendulous appearance of *Sphika* (Hip), *Udara* (Abdomen) and *Stana* (Chest) due to excess deposition of *Meda* (Fat) along with *Mamsadhatu* and also having unequal an abnormal

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distribution of *Meda* with reduced enthusiasm towards life is called *Atisthula*.<sup>[1]</sup> According to the modern science, Obesity is defined as increase in body weight beyond the limitation of skeletal and physical requirements as the result of excessive accumulation of body fat.

#### Classification

Vagbhata has mentioned three types of Sthaulya i.e. Adhika, Madhyama and Hina with management point of view.

- Hina Sthaulya: (B.M.I. 25-30 kg/m2 Over Weight) - Mild degree of overweight, without any complication or secondary disease, with less than four undesirable symptoms and with duration of less than 1 year – can be considered as HinaSthaulya.
- Madhyam Sthaulya: (B.M.I. 30-40 kg./m2 Obese) Moderate degree, with least complications without secondary disease, with less than 8 undesirable symptoms and duration of 1 to 5 years can be considered as Madhyam Sthaulya.
- Adhika Sthaulya: (B.M.I. > 40 kg./m2 Very Obese) Excessive degree, with complication and secondary disease with all 8 undesirable symptoms and duration of more than 5 years can be considered as Adhika Sthaulya.<sup>[3]</sup>

#### **Nidana** (Etiological factors)

All the etiological factors can be classified into four groups:

- Atisampuranat: Excessive and uncontrolled diet habbits.
- Avyayamat: Less physical activities.
- Manasaja: Psychological factors.
- Beejadoshaja: Genetic / Hereditary defect.

#### Role of Aharatmaka Nidana

Ahararasa plays an important role in increasing Medadhatu in Sthaulya. Acharya Sushruta has mentioned that Sthaulya and Karshya depends upon the quality and quantity of Ahararasa. [2] All the

Aharatmaka Nidana ultimately decreases physical activity, which increases *Kapha* and leads to *Meda* deposition.

#### Role of Viharatmaka Nidana

Viharatmaka Nindana like Divaswapna having Abhishyandi property leads to blockage of the micro channels of the body, specifically in Medovahasrotas. During sleep, metabolic rate is reduced.

#### Role of Manas Vyapara

Sthaulya is also considered under the group of psychosomatic diseases Acharya Charaka, mentioned two psychological factors: Harshantya (Excessive pleasure) and Achintana (Jolliness).<sup>[1]</sup> With this type of psychological well being and jolliness that person indulges more in worldly pleasure and leads to the accumulation of excess fat.

#### Role of Beejadosha

Acharya Charaka has described that Beejadosha plays a major role in *Medovriddhi*. Defect of Beejabhagavayava i.e. part of Beeja, which resembles with Genes, may lead to defective development of that organ. Bhavamishra also mentioned that increased proportionate of *Meda* and decreased proportion of Shukra in Beeja at the time of conception predisposes towards development of fleshy but weak body. This indicates role of hereditary factor in genesis of Sthaulya.

#### Samprapti (Pathogenesis)

Few components of body is required for manifestation of any diseases are as follows,

- 1. Dosha
- 2. Dushya
- 3. Srotas
- 4. Agni
- 5. Ama

#### 1. Dosha

In pathogenesis of *Sthaulya*, all three *Doshas* are vitiated.

- a) Vata: In this disease, Vata has been mentioned in the state of Avrita in Kostha, which makes the Agnivaishamya, ultimately increases the demand of food. The involvement of Samana Vayu<sup>[1]</sup> can be clearly postulated with the evidence of Agni Sandhukshana and improper distribution of fat in the body proves the involvement of Vyana Vayu.
- b) *Pitta*: In *Pitta Vriddhi* as well as in *Sthaulya*, the symptoms like *Atikshudha*, *Atipipasa*, *Swedadhikya*, *Daurg*and*hya*<sup>[2]</sup> have also been mentioned. *Pachaka Pitta* is mainly involved in the aetiopathogenesis of the disease.
- c) Kapha: In the pathogenesis of Kaphadosha, excessive consumption of Ahara like Guru, Snigdha, Madhura, Sheeta, Picchila; Vihara like Avyayama, Divaswapna etc. Most of symptoms of Sthaulya come under the category of Kapha Vriddhi (Prakopa). [1] i.e. Alasya, Gatrasadana, Angagaurava, Nidradhikya etc. The Sthaulya Rogi usually belongs to Kapha Prakriti so they may have slow and lethargic physical activity with Sthula Anga by nature and also they have more pleasure and less tension anxiety, so Kapha Prakriti persons are more prone to become obese (Sthula).

#### 2. Dushya

Acharya Sushruta<sup>[2]</sup> has mentioned Sthaulya as a Dusya dominant disease and in this disease the excessive production of abnormal Meda Dhatu is clearly visualized. Kapha is seated in Meda along with other Dhatus. In Sthaulya excessive intake of Guru Snigdha, Madhuradi Guna dominant diet, increase accumulation of Medodhatu.<sup>[2]</sup>

#### 3. Srotasa

In the *Sthoulya*, involvement of *Medovaha Srotasa* is the main factor along with the involvement of other *Srotasa*. According to *Acharya Charaka*,<sup>[1]</sup> *Avyayama*, *Divaswapa* excessive intake of *Madhura Dravyas* and *Varuni*, are the *Nidana* of *Medovahastrotodushti*.<sup>[1]</sup> It indicates clear involvement of *Medovahasrotasa* along with *Rasavahasrotasa*. *Atisweda* and Daurgandhya indicate the involvement of

Swedavahasrotasa. Presence of Atipipasa indicates the involvement of Udakavahasrotasa. In the pathogenesis of Sthaulya, increase fat deposition inside the muscle (Vasa) indicates the involvement of Mamsavahasrotasa.

#### 4. Agni and Ama:

According to Vagbhata,<sup>[3]</sup> Mandagni is considered as root cause of all disease. Due to Mandagni, formation of Ama occurs. Sthaulya results from derangement of Dhatvagni. In Sthaulya, due to vitiation of Vata by obstruction of Meda, Tikshnagni is a prominent feature. Chakrapani and Dalhana gives explanation, that in the stage of Tikshnagni, person go for Adhyashana, Kalavyatitaaharasevana again and again, which leads to disturbance in Agni and subsequently formation of Ama may take place. It has been further explained by Dalhana that in the Sthaulya, formation of Ama is more due to decrease of Medodhatvagni than Jatharagni.

According to 'Dhatu Parinama concept', (at Dhatvagni level) Vriddhi of previous Dhatu and Kshaya of further Dhatu take place. In cases of Sthaulya, excessive consumption of Guru, Madhura, Snigdhaguna dominant diet produces excessive and inferiority Medodhatu Poshaka Annarasa, this makes Medodhatvagnimandya. So as per above concept in the state of Medodhatvagnimandyata, previous i.e. Medodhatu increase and further/Uttaradhatu i.e. Asthi, Majja, Shukra are decreased.

According to Ayurveda: There are 7 basic tissue elements in the human body Known as *Dhatus*. These are present in every human body in a particular proportion and any change in the equilibrium leads to diseases. Fat or the *Meda* is one of the *Dhatus*.

**According to modern:** Obesity can be assessed by following tools:

- Body Mass Index
- Waist circumference
- Waist / Hip ratio
- Relative Weight (Rw)
- Skin fold thickness

#### **Body Mass Index**

The B.M.I. is the actual body weight divided by the height squared (kg/m2). This index provides a satisfactory measure of obesity in people who are not hypertrophied athletes.

The classification of obesity is:[5]

Under weight - <18.5 kg/m2</li>

Normal weight - 18.5 - 24.9 kg/m2

Over weight - 25 - 29.9 kg/m2

Obesity (Class-I) - 30 - 34.9 kg/m2

Obesity (Class-II) - 35 - 39.9 kg/m2

 Morbid Obesity - > 40 kg/m2 (Class-III)

#### **Signs and Symptoms**

- Reduction of longevity
- Unpleasant of body odour
- Excessive sweating
- Breathlessness on exertion
- Difficulty in walking
- Tiredness
- General deability
- Loss of vitality
- Excessive hunger

#### Chikitsa of Sthaulya

Depending on the body type, the chikitsa varies.<sup>[3]</sup> If the person is diagnosed as *Vaata* type, then purification procedures for Vaata like cleansing enemas. After that mild oil application and fomentation is used. Only minimum oil application is used for treating obesity.

External oil application is carried out with oil containing hot herbs like calamus, ginger and mustard. External fomentation can be done by various methods like whole body fomentation via. steam box.

After fomentation oil enemas will be given. Later, usually contains a decoction of *Dashmoola*, Honey, Salt, some specific herbs and water.<sup>[3]</sup>

If the person is diagnosed as *Kapha* type, then external message with powders of agaru, calamus, ginger or mustard will be done.<sup>[3]</sup> These substances help to remove excess fat deposited under the skin.

In obese persons, the digestive fire may be optimum. To improve its power herbs like *Trikatu, Shilajit, Katuki, Barberry, Calamus, Chitraka, Karanja, Haridra, Guggulu, Arjuna, Neem, Apaamarga, Brahmi, Bilwa* are used.

In Ayurvedic texts different Shodhna procedure i.e. Vamana, Virechana, Lekhana Basti, Raktamokshana are mentioned for the treatment of Sthaulya. Lekhana Vasti with Varaadikwath produced statistically significant improvement in obesity. Lekhana Vasti with Varaadi Kwatha' by virtue of its ingredients Katu, Tikta, Kashaya rasa, Laghu, Ruksha, Tikshna Guna, Ushna virya, Katuvipaka, Lekhana, Kapha-vatahara, Deepana-pachana and Sroto-shodhaka properties.

Shamana Chikitsa can be implemented through seven different ways. Deepana, Marutsevana, Kshudha Nigraha, Pachana, Atapasevana, Trusha Nigraha, Vyayama. Langhana is advisable in Samtarpanajanya Vyadhi, in Amashyotha Vikara, in Shleshmika Vikara, in Rasaja Vikara. So, all seven types of Langhana can be applied for the patients of Sthaulya according to Rogi Roga Bala.

Nidana Parivarjana is also important measure for Sthaulya.

Ayurveda is an alternative natural herbal treatment to cure overweight condition by balancing the body. The medicine for weight reduction is;

- Guduchi helps in the proper canalization of fats in the body thus used as effective ayurvedic treatment for fat reduction.
- Guggulu reduces fat accumulation in the body and gives a leaner physique.
- Indian Gooseberry contains vitamin C that disintegrates fatty buildup in the body.

- Use of *Devadaru*, *Musta*, *Triphala*, *Takrarishta* and honey is recommended as a natural herb cure for overweight.
- Powder of Yava and Amalaki is an excellent formulation for reducing fat in the body.

**Table 1: Diet Chart** 

Time	Contents					
At 10 AM	Salad vegetable/ Fruit / Puffed Rice					
At 11 AM	Soup/ Yush/ Saktu					
At 12:30 PM	Lunch Roti- barley(yava)/ Bajra/ Jwari/ Ragi Vegetable Chutney Butter Milk Pickle, Amla/kumara (Aloevera)/ Bittergourd(Karvelak)					
At 4 PM	Snacks- Puffed rice, murmura, puffed rajgira, puffed jowar					
At 7 PM	<b>Dinner</b> - Krushara, daliya					

**Table 2: Vegetables** 

Na me	Rasa	Veer ya	Vipa ka	Guna	Doshag hnta	Rogagh nta
Bott ol Gua rd	Katu, Tikta	Ush na	Mad hur	Laghu Snigd ha	Tridoshg han	Deepan , Pachan, Ruchya.
Ridg e Gua rd	Tikta	Ush na	Katu	Laghu Ruksh a, Tiksh na	Kapha- Pittahar a	Deepna , Vamak a
Gre	Madh	-	-	Laghu	Kapha-	Medog

en Gra m	ur, Kash aya			Visha d	Pittahar a	hna, Jwarog hna
Carr ot	Madh ur, Katu, Tikta	Ush na	Katu	Laghu Tiksh ana	Kapha- Vatahar a	Rukshy a, Deepna na

Table 3: Sthoulyahara Capsules and Medicated Water

Dravy a	Rasa	Veer ya	Vipa ka	Gun a	Doshgha nta	Rogaghnta
Amal aki	Panc h- Rasa	Shee ta	Mad hur	Guru , Ruks ha, Shee ta	Tridosha ghna	Rasayana, Jwaraghna , Pramehag hna
Harita ki	Panc ha- Rasa	Ush na	Mad hur	Lagh u, Ruks ha	Tidoshag hna	Rasayana, Jwaraghna , Kushtaghn a
Bibhit aka	Kash aya	Ush na	Mad hur	Lagh u, Ruks ha	Tidoshag hna	Jwaraghna , Raktastam bhaka
Chitra ka	Katu	Ush na	Katu	Lagh u, Ruks ha, Tiksh na	Kapha- Vata Shamaka	Jwaraaghn a, Shothahar a, Kanthya
Haridr a	Tikta, Katu	Ush na	Katu	Lagh u, Ruks ha	Kapha – Vata Shamaka , Pittavard haka	Kushthagh na, Vishaghna
Katu Jeerak a	Katu	Ush na	Katu	Lagh u, Ruks ha	Kapha- Vatasha maka, Pittavard	Deepana, Pachana, Pramehag hna

					haka	
Methi ka	Katu	Ush na	Katu	Lagh u, Snig dha	Vatasha maka	Deepana, Pachana, Anuloman a
Ushee ra	Mad hur, Tikta	Shee ta	Katu	Ruks ha, Lagh u	Pittasha maka	Trishna Nigrahana, Stambhan a

#### **CONCLUSION**

As various methods are described above, therefore these methods are very helpful to reduce fats and to overcome the problem of obesity. Although the body nature of everyone is different from each other so the effects of the treatment may vary from individual to individual. The *Ahara* and *Vihara* also has direct effect on the treatment. Therefore, the result also vary on account of *Ahara* and *Vihara* of the person. So the person have to adopt above method strictly to get better results.

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