



## AN APPRAISAL ON STHAULYA PATHOLOGY ACCORDING TO AYURVEDA

Dr. Puja Arunrao Gawande\*

Associate Professor, Phd. Scholar, Department Rachana Sharir, Shrimati Sumitrabai Thakre Ayurvedic College, Yavatmal.

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\*Corresponding Author: Dr. Puja Arunrao Gawande

Associate Professor, Phd. Scholar, Department Rachana Sharir, Shrimati Sumitrabai Thakre Ayurvedic College, Yavatmal.

### ABSTRACT

Obesity is a overpowering lifestyle disorder. In Ayurveda, Obesity can be correlated with *Sthaulya* or *Medoroga*. Today, one can see a huge gap in society where some people are in trouble due to overweight while some are suffering from malnutrition. Obesity is a non communicable disorder but its increasing rate is escalating a burden on society. *Sthaulya* is causative factor as well as a disease itself and it has significant involvement in pathology of certain disorders like Heart diseases, liver and kidney diseases. A very limited treatment modalities are available in conventional medical science. However, Ayurveda has its own *Samprapti* and treatment protocols for obesity. This article is aimed to review the Ayurveda perspectives on *Sthaulya* from various Ayurveda classics.

**KEYWORDS:** Obesity, *Sthaulya*, *Medoroga*, Ayurveda, Pathophysiology.

### INTRODUCTION

Worldwide obesity has more than doubled since 1980. Most of the world's population lives in countries where overweight and obesity kills more people than underweight.<sup>[1]</sup>

#### Etymology of *Sthaulya*

The word *Sthula* is derived from root 'Sthu' with suffix 'Ach' which stands probably for thick or solid or strong or big or bulky. *Sthaulya* is also considered as *Medoroga* or *Medodushti*. The different meanings denoted by various *Granthakaras* can be summarized as below-

- According to *Vachaspathyam*, the word *Sthaulya* means heaviness of the body.
- According to *Amarakosha*, it stands for excessive growth of the body
- According to *Hemachandra*, it indicates the state of over nutrition of body or dullness of intellect.
- According to *Kautilya*, the word "*Sthulata*" means largeness or bigness or bulkiness or stoutness of body.

The word "*Medas*" and "*Medo*" take their origin from Sanskrit root "*Mid*" with an addition of "*Asun*" and "*Ach*" *Pratyaya*, which stand probably for *Medodhatu*.

#### *Nirukti*

A person having heaviness and bulkiness of the body due to extensive growth especially in *Udaradi* region is

termed as "*Sthula*" and the state (*Bhava*) of *Sthula* is called "*Sthaulya*".<sup>[2]</sup>

**Meanings:** Stoutness, Bigness, Largeness, Thickness, Excessive size.<sup>[3]</sup>

#### Synonyms

*Amarakosha* has given synonyms of *Sthula* as *Vipula*, *Pina*, *Pinvi*, *Pivara*, which indicates over nutritional condition of the person.

#### Definition

*Sthaulya* has been defined as a person, "who on account of the excessive increase of *Meda* and *Mamsa*, is disfigured with pendulous, buttocks, belly and breasts and whose increased bulk is not matched by a corresponding increase in energy".

#### Role of *Aharatmaka Nidana* (dietary causes) in *Sthaulya*

*Ahararasa* plays a major role for increasing *Meda Dhatu* in *Sthaulya*. So, *Acharya Sushruta* has mentioned this as *Nidan*.<sup>[4]</sup> *Sthaulya* and *Karshya* depend upon the quality and quantity of *Ahararasa*. On the basis of *Samanya Vishesh Siddhanta*,<sup>[5]</sup> The excessive consumption of similar substance (*Dravya Samanya*), similar quality (*Guna Samanya*) or similar in action (*Karma Samanya*) results in the over production of *Dhatu*. In the same manner increased intake of *Aharatmaka Nidana*

which are described above causes over production of *Medodhatu*.

### Role of *Viharatmaka Nidana* (lifestyle factors) in *Sthaulya*

All the *Viharatmaka Nidana* ultimately decreased physical activity, which aggravates *Kapha* and leads to *Meda Vriddhi*. *Viharatmaka Nidana* like *Divaswapa* having *Abhishyandi* property leads to blockage of the micro channels of the body, specifically in *Medovaha Srotas*.<sup>[6]</sup> Moreover, reduced metabolic rate during sleep is an important factor for genesis of excess fat.

### Role of *Manasika Nidana* (psychological factors) in *Sthaulya*

Due to adaptation of modern lifestyle, a person has reduced his physical activity and instead of that, the mental work is increased. As a result now a days the diseases caused by psychogenic factors are seen extensively more. *Acharyas* also mentioned some psychogenic causes of *Sthaulya* in *Ayurvedic* texts, because *Sthaulya* is also considered under the group of psychosomatic diseases.

*Harshanityata* and *Achintana* are two psychological factors mentioned, which are responsible for *Meda Vriddhi*. These factors are *Kapha* aggravating factors leading to *Meda* deposition. With this type of psychological well being and jolliness those people indulge more in worldly pleasure and excess energy stored in the form of *Meda*.<sup>[7]</sup>

### Role of *Beejadoshha* (Genetic factors)

*Acharya Charaka* has mentioned that *Beeja Dosha* plays a major role for *Medovriddhi*.<sup>[8]</sup> Defect of *Beejabhagavayava* i.e. part of *Beeja*, which resembles with Genes, may lead to defective development of that organ. Also, *Bhavamishra* has mentioned that increased proportionate of *Meda* and decreased proportion of *Shukra* in *Beeja* at the time of conception predisposes towards development of stout but weak body. Moreover, over nutrition particularly with *Madhura Rasa* during pregnancy is mentioned as a causative factor for birth of obese child, which indicate role of hereditary factor in genesis of *Sthaulya*.<sup>[9]</sup>

### Classification Of *Sthaulya*

For the purpose of diagnosis, prognosis and easy management disease should be classified as per severity as well as chronicity. Three types of *Sthaulya* i.e. *Adhika*, *Madhya* and *Heena* have been mentioned for better management while narrating the indication of *Langhana Upakrama* in *Sharangadhara Samhita*.<sup>[10]</sup> *Acharya Charaka* has classified *Sthaulya* as *Sthula* and *Atisthula* while *Acharya Sushruta* as *Sthaulya* and *Medoroga*. *Acharya Vagbhata* classifies *Sthaulya* in *Adhika*, *Madhya*, *Hina* types. *Sharangadhara* describes *Sthaulya* as *Medodoshha*

From the above references *Sthaulya* can be correlated with different types of obesity as follows

WHO had used Body mass index (BMI) to define obesity. Based on BMI obesity can be classified as follows (Gray, Fujioka 1991).

**Table 1: BMI Classification.**

Sr. No.	BMI	TYPE
1	18.5-24.9	Normal weight
2	25.0-29.9	Overweight
3	30.0-34.9	Class 1 obesity
4	35.0-39.9	Class 2 obesity
5	40.0	Class 3 obesity

### *Sthaulya Poorvaroopa*

*Poorvaroopa* of *Sthaulya* has not been directly described by any *Ayurvedic* text. As per directions given in *Vatavyadhi*, *Urakshata*, and *Trishna* chapters, the initial manifestations of *Sthaulya* related symptoms can be considered as the premonitory symptoms or the *Poorvaroopa* of *Sthaulya*. Moreover, *Medovaha Srotodushti Lakshana* and the *Lakshanas* which are also described as *Poorvaroopa* of *Prameha* can be considered as the *Poorvaroopa* of *Sthaulya*.<sup>[11]</sup> *Bahudrava Sleshma* and *Abaddha Meda* are the two morbid components involved in the pathogenesis of *Prameha* which are found vitiated in *Sthaulya* too.<sup>[12]</sup> So *Shleshma Sanchaya* and *Medodushti Lakshana* related *Poorvaroopa* of *Prameha* and *Medovaha Srotodushti Lakshana* described by *Sushruta* can be considered as the *Poorvaroopa* of *Sthaulya*.<sup>[13]</sup>

### *Sthaulya Rupa*

*Chala Sphika*, *Chala Udara*, *Chala Stana*, *Ayathopchayotsaha*, and *Atimeda-Mamsa Vriddhi* are very obvious in all the patients of *Sthaulya*.<sup>[14]</sup> *Kashyapa* mentions *Atisthula Jangha Pralanga*, *Nitamba* and *Udara* are mentioned as despicable signs of *Atisthula*.<sup>[15]</sup> Besides these cardinal symptoms, eight disabilities of *Sthaulya* viz. *Ayusyahrassa*, *Javoparodha*, *Kricchravyavayata*, *Daurbalya*, *Daugandhya*, *Svedabadha*, *Ksudhatimatrata*, *Pipasatiyoga* are the most prominent clinical features of *Sthaulya* as narrated by *Charaka*,<sup>[16]</sup> *Sushruta*,<sup>[17]</sup> and *Ashtanga Sangraha*.<sup>[18]</sup>

### *Samprapti*

The term *Samprapti* is applied to express the course of the disease, from *Nidana Sevana* to *Vyadhi Utpatti*. The knowledge of *Samprapti* helps in the comprehension of the explicit features of a disease like *Dosha*, *Dushya*, *Srotodushti* etc. *Sthaulya* has been narrated as *Dushya* prevailing disorder i.e. *Medaja Vyadhi*. *Medovriddhi* is a complex process. The *Samprapti* of *Sthaulya* has been discussed in *Charaka Samhita* as well as in *Sushruta Samhita*. *Acharya Charaka* has accepted "*Ahara*" as most common pathogenic factor for *Medovriddhi* in *Sthaulya*; Whereas *Sushruta* has accepted *Amadosha*. According to *Charaka*, Due to obstruction of *Srotas* by *Meda*, the *Vata* moving mainly into stomach, whips up

the *Agni* and absorbs the food. The corpulent man digests food speedily and craves for food exceedingly. Excessive eating produces more production of *Rasa* which causes over growth of *Meda Dhatu* leading to *Sthaulya*.<sup>[19]</sup> According to *Sushruta Ama Rasa* is produced due to *Kaphavardhaka Ahara, Adhyashana, Avyayama, Divaswapa*. The *Madhura Bhava Ama Rasa* moves within the body, *Snigdhamsha* of this *Anna Rasa* causes *Medovridhi* which produces excessive stoutness.<sup>[20]</sup> *Dosha, Dushya, Srotas and Agni* in *Sthaulya* manifestation can be evaluated as follows.

### Dosha

*Sthaulya* is a *Kapha* predominant *Vyadhi* but involvement of *Vata* and *Pitta* cannot be ignored. These three *Doshas* collectively contribute in the process of pathogenesis in *Sthaulya*. According to many Ayurveda fellows, *Sthaulya* is a *Kaphaja Vyadhi*.<sup>[21]</sup> Moreover, *Acharya Charaka* has mentioned *Sthaulya* under *Shleshma Nanatmaja Vyadhi*. Excessive intake of *Guru, Snigdha, Madhura, Sheeta, Picchila* and *Abhishyandi Ahara* and *Vihara* like *Diwaswapa, Achintana* etc lead to vitiation of *Kapha*. Most of the symptoms of *Sthaulya* comes under the category of *Kaphavridhi* i.e. *Alasya, Gatrasada, Angagaurava, Nidradhikya* etc. Usually the *Sthaulya Rogi* belongs to *Kapha Prakriti*. So, they are slow and sluggish in physical activity. In obese person, *Pittaja Lakshanas* are very less but most of obese persons have *Teekshnagni*. Which is also increased by *Pitta Dosha* Moreover symptoms like- *Atipipasa, Swedadhikya, Dauragandhya* have also been mentioned in the *Pitta Vriddhi Lakshanas*. *Vata* plays two types of roles in *Sthaulya*. First is the state of *Avrita Vata* which provokes the *Agni* and ultimately increases the demand for the food (*Abhyavaharan Shakti*) and absorbs the nutrients. Second is inactiveness of *Vyana Vayu*. *Vyanvayu* is responsible for proper circulation and distribution of *Rasadhatu*.

Due to *Sanga* in *Medovaha Srotas* the nutrients cannot be transported properly by *Vyanavayu* to respective *Dhatu*s. Involvement of *Saman Vayu* can be clearly postulated with the evidence of *Agnisandhukshana* and improper distribution of fat in the body proves the involvement of *Vyanavayu*.<sup>[22]</sup>

**Dushya:** Without *Doshadushya Sammurechana* disease process is not possible. *Acharya Sushruta* has mentioned *Sthaulya* as a *Dushya* prevailing disorder,<sup>[23]</sup> and in this disease, the excessive production of abnormal *Meda Dhatu* is clearly visualized. Here, *Rasa, Mamsa, Meda, Majja* and *Shukra Dhatu*s are *Dushyas* as *Kapha* is seated in all these *Dhatu*s on the basis of *Ashrayashrayeebhava*. So, vitiation of *Kapha* also leads to vitiation of above *Dushyas*. *Poshakansmha* in excessive quantity and quality increases the particular *Dhatu*. In *Sthaulya*, excessive intake of *Guru, Snigdha, Madhuradi Guna* dominant diet increase accumulation of *Medodhatu*.

**Srotas:** In *Sthaulya*, the involvement of *Medovaha Srotas* is the main factor along with the involvement of other *Srotas*. *Avyayama, Diwasvapna*, excessive intake of *Medura Dravya* and *Varuni* are vitiating factors for *Medovaha Srotodushti* as mentioned in *Charaka Samhita*.<sup>[24]</sup>

It indicates the clear involvement of *Medovaha Srotas* along with *Rasavaha Srotas*. *Atisweda* and *Daurgandhya* indicate the involvement of *Swedavaha Srotas*. Presence of *Atipipasa* indicates the involvement of *Udakavaha Srotas*. In the pathogenesis of *Sthaulya*, increased fat deposition inside the muscle indicates the involvement of *Mamsavaha Srotasa*.

### Agni

**Jatharagni:** In *Sthaulya* due to obstruction of *Meda Vata* remains in the *Koshtha* and causes *Teekshnagni*. *Chakrapani* and *Dalhana* have tried to clarify this controversy by giving explanation that in the stage of *Teekshnagni*, person goes for *Adhyashana* and *Kalavyatita Ahara Sevana*, which leads to disturbance in *Agni*, and subsequently formation of *Ama* may take place. Moreover, *Dalhana* has explained that in the *Sthaulya* formation of *Ama* is more due to decrease level of *Medodhatvagni* than *Jatharagni*.<sup>[25]</sup>

**Dhatvagni:** As per *Vagbhata Pachakansa* present in each *Dhatu* is referred to *Dhatvagni* i.e. *Ushma* presents in *Dhatu* is part of *Jatharagni* and is controlled by it, *Dhatvagnimandya* of specific *Dhatvagni* causes *Vriddhi* of that *Dhatu* and *Vis-à-vis*. In the state of *Dhatavagnimandya Kshaya* of *Uttar Dhatu* takes place. In case of *Sthaulya Medodhatvagni Poshakamsha* stated at *Jatharagni* level is vitiated. So, *Medodhatvagni* may not do its work properly and also due to good *Jatharagni, Meda Dhatu Poshaka Rasa* is formed in more quantity so overload on *Medodhatvagni* causes accumulation of more *Meda Dhatu* in their depots. In addition, due to decrease production of *Sukshma* part and *Sara* part at *Medodhatvagni* level, further *Asthi, Majja* and *Shukra Dhatu* get less *Poshaka Rasa*.<sup>[26]</sup>

### Sthaulya Upadrava

High intensity and severity of *Sthaulya* due to *Atikshudha* and *Atipipasa* and manifestations of severe complications and even death due to its ignorance have been mentioned with example of *Davanala* by *Charaka*,<sup>[27]</sup> Obstruction of *Vata*,<sup>[28]</sup> and the disorders of *Shleshma, Rakta* and *Mamsa* along with symptoms, complications and secondary diseases of *Sthaulya* are stated as the result of morbid *Meda*,<sup>[29]</sup> Hence for the better understanding, the complications are summarized as *Ama Roga, Apachi, Arsha, Atisara, Bhagandara, Jwara, Kamala, Kasa, Visarpa, Udara Roga, Urustambha, Vriddhi, Sanyasa, Shlipada, Prameha Pidika* etc.

**Sadhyasadhyata**

*Sthaulya* is a *Kricchrasadhyata Vyadhi*. Acharya Charaka has mentioned the bad prognosis of *Sthaulya*. If an obese person is not duly managed, he is prone to death due to excessive hunger, thirst and other complications. *Sahaja Sthaulya* is considered as *Asadhya*. *Medogata* diseases are curable only in uncomplicated patients with more strength and less chronicity.<sup>[30]</sup> So, *Vagbhata* has mentioned *Sthaulya* as *Asadhya Vyadhi* due to its relapsing and challenging nature. Sudden drastic weight reduction is considered as *Arishta*.<sup>[31]</sup> *Yogaratanakara* has clarified that sudden weight loss or gain could be fatal within six months. Therefore, *Sadhyasadhyata* of *Sthaulya* can be constructed on the basis of general principles of *Sadhyasadhyata* depicted in *Ayurvedic* texts which are given below.<sup>[32]</sup>

**Sukhasadhyata**

*Jatottara Heena Sthaulya* having duration of one to five years, without any complications or secondary disease, can be considered as *Sukhasadhyata*.

**Table 2: Pathya-Apathya in Sthaulya.**

Ahara Varga	Pathya	Apathya
1. Shuka Dhanya (Cereal grain)	PuranShali, Kodrava, Shyamak, Yava, riyangu, Laja, Nivara, oradushaka, Jurna, Prashatika, anguni	Godhum Naveen Dhanya (Shali)
2. Sham iDhanya (Pulses)	Mudga, Rajamasha, Kulatha, Chanaka, Masur, Adhaki, Makusthaka	Masha Tila
3. Shaka Varga (Vegetables)	Patol, Shigru, Vrutnaka, Katutikta Rasatmaketc, Evaruka, Adraka, Mulaka, Surasa, Grajjan	Kanda Shaka, Madhura, Rasatmak
4. Phala Varga (Fruits)	Kapitha, Jambu, Amalki, Ela, Bibhitaki, Haritaki, Maricha, Pippali, Erand Karkati, Ankola, Narang, Bilvaphala.	Madhura Phala
5. Drava Varga	Honey, Takra, shnajala, Tila & Sarshapa Tail, Ashava Arista, Surasava, Jeerna Madhya	Milk Preparations, (Dugdha, Dhadhi, Sarpi) Ikshuvikara
6. Mamsa Varga	Rohita Matsya	Aanupa, Audaka, Gramya Mamsa Sevana

**Chikitsa- Sthaulya Chikitsa** can be described under three headings as

1. Nidan Parivarjan
2. Sanshodhan
3. Sanshaman

**1) Nidan Parivarjan**

Ayurveda maintains its antiquity in treatment modality over other systems of medicine where Acharyas have described to search the root cause of disease first and get rid of it to get expected results of treatment. These indicate that the root of *Sthaulya* i.e. *Aharatmaka Viharatmaka* and *Manasika* factors should be avoided. *Chikitsa* comprehends following measures in Ayurveda viz

1. Preventive or prophylactic therapy -
2. Curative therapy

The prevention or protection of the body against the diseases can be achieved by the proper follow-up of the regimen of *Swasthvritta* and adoption of *Rasayan* and *Vajikarana*.

**Kricchrasadhyata**

*Jatottara Madhyama Sthaulya* having duration of five to ten years with least complications but without secondary diseases can be considered as *Kricchra Sadhya*.

**Asadhya**

*Sahaja Sthaulya* is *Asadhya*. *Jatottara Adhika Sthaulya* having duration of more than ten years, in the presence of complication and secondary diseases can be considered as *Asadhya*.

**Samshodhana Therapy** - The therapy in which the vitiated *Doshas* are eliminated after mobilizing them from their respective sites by *Urdhva* or *Adha marga* from the body is known as *Shodhan* Therapy.<sup>[33]</sup> There are two main parts of *Shodhana* therapy.

**Table 5: Shodhana Therapy.**

Bahya Samshodhana	Abhyantara Samshodhana
Udavartana	Vamana
Avagah	Virechana
Pariseka	Nasya
Lepana	Niruha Basti

**3) Samshamana Therap**

Means, the therapy, which could not excrete the *Dosha* from the body, could not disturb the equation of balanced *Dosha* and simultaneously bring equilibrium to imbalance of *Dosha*, is called as *Sanshamana*.

Among *shada Upakarma*, *Langhana* and *Rukshana* can be administered for *Sanshaman* purpose in *Sthaulya*.<sup>[34]</sup> *Shamana Chikitsa* can be implemented through seven

different ways viz- *Deepana, Marutsevana, Kshudha Nigraha Pachana, Atapasevana, Trusha Nigraha, Vyayama.*

All these seven procedures can be counted under single title *Langhana Chikitsa*. *Langhana* can be applied for the patients of *Sthaulya* according to *Rogi-Roga Bala*.

According to Charaka Samhita Administration of *Guru* and *Apatarpana* articles which possess additional *Vata, Shleshma* and *Medonashaka* properties is considered as an ideal for *Sanshaman* therapy.<sup>[35]</sup> *Chavyadi Saktu, Triphaladya Churna, Erandpatra Kshara, Badaripatra Peya, Amritadi Guggulu, Dasanga Guggulu, Trayusnadi Guggulu, Lauha Rasayana, Lauharishta etc. Kalpa should be used internally in Sthaulya patients. Ashtanga Hridaya also describes Gomutrapaki Haritaki, Rodhrasava, navaka guggulu, amruta guggulu, Vardhamana Bhallataka rasayana for sthauilya patients.*<sup>[36]</sup>

**Aushadha Sevana Kala (time for drug administration)**  
Ashtanga Samgraha mentioned the *Pragabhakta Kala* i.e. administration of medicine before meal.<sup>[37]</sup> It has been further elaborated by Sharangadhara who advised to take *Lekhana* drug on empty stomach in early morning and before a meal.<sup>[38]</sup> So, for the treatment of *Sthaulya* medicine should be administered before meal and ideally in the morning and empty stomach.

## CONCLUSION

Today, in the race of success people are unnoticed about hazards of modified lifestyle which is giving a chance for many life style disorders to become a part of life. Obesity is one of these lifestyle disorders. Obesity makes the activities slow and creates burden on many systems in body like cardiovascular system. Modern medicine has very limited span for this overwhelming condition. Ayurveda treatise has detailed description about *Sthaulya*. According to Ayurveda it is not only a condition caused by faulty eating habits but also due to psychological and genetic factors too are very important in *Sthaulya* pathology. *Sthaulya* can be treated by *Shamana* or *Shodhana Chikitsa* depending on the type of *Sthaulya*. *Virechana* and *Lekhana Basti* is found very effective in obesity patients. *Pathya Apathya* guidelines also should be taken into consideration in *Sthaulya* patients.

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