

A REVIEW OF AYURVEDIC MANAGEMENT OF STHAULYA W.S.R. TO OBESITY

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Abstract:

Obesity as a common chronic disorder of excessive body fat and has become a global epidemic. In Ayurveda, an individual whose increased *Meda* and *Mamsa Dhatu* makes his hips, abdomen and breasts pendulous and whose vitality is much less than his body size is *Sthoola* (obese). *Acharyas* have described it for all *Santarpanajanya Vyadhi*. Concept of *Aptarpana* is one of the most important basic treatment principles of Ayurveda. *Acharya* Sushruta has mentioned, *Sthaulya* and *Karshya* depend upon the quality and quantity of *Ahararasa*. So we can say that *Ahararasa* plays a major role for increasing *Meda Dhatu* in *Sthaulya*. *Viharatmaka Nindanas* are activities having *Abhishyandi* properties like *Divaswapna* & *Avyayama*. *Harshanitya* and *Achintana* are two psychological factors responsible for *Sthaulya*. *Acharya Bhavmishra* mentions that increased proportion of *Meda* and decreased proportion of *Shukra* in *Beeja* at the time of conception predisposes towards development of *Sthula* but weak body of offspring. *Samprapti* of *Sthaulya* includes obstruction of *Srotas* by vitiated *Meda*, *Vata* move into *Koshtha* and increases the *Agni*, which absorbs the food fastly. The corpulent person digests the food speedily and craves for food inordinately. Over eating produces more *Rasa*, which results in over production of *Meda Dhatu*, which leads to *Sthaulya*. Administration of *Dravya* having *Guru* and *Aptarpana* properties and also possess additional *Vata*, *Shleshma* and *Medohara* properties is considered as an ideal therapy for *Sthaulya*.

Keywords: *Aptarpana*, *Sthaulya*, Obesity, *Shleshma Medoharakriya*

Introduction:

An individual whose increased *Meda* and *Mamsa Dhatu* makes his hips, abdomen and breasts pendulous and whose vitality is much less than his body size is *Sthoola* (obese). *Sthaulya* is abnormal and excess accumulation of *Meda Dhatu*. In contemporary medical science it is compared with obesity and it is defined as excess body and visceral fat that poses health risk. The most commonly used definition, established by the World Health Organization in 1997 and published in 2000 defined Obesity as a common chronic disorder of excessive body fat and has

become a global epidemic which is present not only in the industrialized world but also in many developing and even in underdeveloped countries.

According to WHO in 2016 more than 1.9 billion adults were overweight, out of these over 650 million were obese. In 2016, 39% of adults were overweight and 13% were obese. Most of world's population lives in countries where overweight and obesity kills more people than underweight. According to survey by Nutrition Foundation of India, 45 % of women and 29% of men in urban area of the country are overweight. India is in 7th place in terms of obesity index.¹ Earlier, obesity was a life style problem, but now World Health Organisation have classified it as a disease.

Acharyas have described it for all *Santarpanajanya Vyadhi*². Concept of *Apatarpana* is also one of the most important basic treatment principles of Ayurveda. *Acharya Charaka* described the features of healthy body, having equal distribution of *Mamsa* (muscular tissue) and properly distributed build up³. But now days, majority of people are not in *Sama Samhanana* (well distributed body builds up). Overweighing and Obesity is the chief complaint of the people in present era. *Acharya Charaka* described *Sthaulya* as *Santarpanajanya Vyadhi*⁴ and *Atisthula Purusha* has been considered as one of the *Astaunindita Purusha*⁵. *Sushruta* further said that *Madhyama Sharira* is best but *Atisthula* and *Atikrisha* always have some complaints⁶. According to *Acharya Sushruta Rasa Dhatu* is responsible for *Sthaulya* and *Karshya*⁷. Qualities of *Ahara* like *Guru*, *Snigdha*, *Madhura*, *Sheeta*, *Manda* etc. increases the *Kapha* excessively and improperly formed *Medho Dhatu* which leads to further complications like *Sthaulya*. One of the most common causes of *Sthaulya* as described by *Acharya Charaka* is *Atisampurnata* i.e., consumption of food more than one's own capacity is *Atisampurna*. *Sthaulya* is a burning problem of present era and responsible for many other diseases. Though it is a *Santarpanajanya Vyadhi*, it can be treated with *Apatarpana Chikitsa*. So keeping this in mind this study has been planned.

Need of study

Due to busy lifestyle, people dont have time to think and act for the healthy life and are not following the proper rules and regulations. Traditional complete food has been also corrupted by junk food or processed food. Most of the people put weight on nutritional values of food without considering their own digestive capacity. Physical work load is also decreased in this modernized world and due to more office work or other reasons people do not do exercise regularly thus they are living sedentary life. Due to this sedentary life style, person has developed so many disorders for themselves and in Ayurveda these diseases related to sedentary lifestyle much resembled with *Santarpanajanya Vyadhis* and *Sthaulya* is one of them. The sign symptoms and etiological factors of *Sthaulya* show very much resemblance to obesity. Obesity is a great burden for society worldwide. Though *Sthaulya* is *Santarpanajanya Vyadhi*, according to Ayurveda all *Santarpanajanya Vyadhis* should be treated with *Apatarpana Chikitsa*. Keeping

such importance of the concept of *Apatarpana* and to authenticate treatment protocol for burning problem of present era i.e. *Sthaulya*, this study has been planned.

Change in diet coupled with increasing inactive lifestyle has sparked off epidemics of obesity in several Asian countries. There has been a significant increase in the consumption of fats and every dense food with a concurrent reduction in physical activity. With the rapid pace of industrialization and economic progress, today more and more jobs are becoming sedentary and dietary patterns are also changing with a decline in cereal intake and increase in the intake of sugar and fats. This all has resulted in increase in incidence of obesity along with its associated problems.

Materials and methods:

The Literary material related to obesity has been collected from Several Ayurvedic texts like Charakasamhita, Sushrutsamhita, Ashtang Sangraham, Ashtanga Hridayam etc.

Etymology (Vyutpatti): The word “*Sthaulya*” derived from *Moola Dhatu* “*Sthu*” with the edition of “*Ach*” *Pratyaya* respectively which means thick or solid or strong or big or bulky.

Definition of Atisthaulya (Obesity): A person having excessive growth of *Medodhatu* and *Mamsadhatu*, which results into pendulous appearance of buttocks, belly and breasts and whose increase bulk is not matched by corresponding increase in energy level.

Causative factor:

Ayurvedic classics have described so many etiological factors of *Sthaulya*. *Acharya* Charaka has described that single causative factor may cause many diseases or single causative factor may lead to a single disease. Many causative factors may cause only one disease or again many causative factors may lead to many diseases⁸. The aetiology factors described for *Sthaulya* in the *Ayurvedic* classics can be classified in 4 groups –1. *Aharaja Nidana*, 2. *Viharaja Nidana*, 3. *Mansika Nidana*, 4. *Anya Nidana*

Except these factors, the components which may vitiate *Medo Dhatu* and *Sleshma Dosha* could also be considered as causative factors of *Sthaulya*. According to *Acharya* Vagbhata *Dhatwagni-Mandya* is main causative factor besides other components in etiopathology of *Sthaulya*⁹. Only *Acharya* Charaka has described the hereditary component i.e. *Beeja Dosha* as causative factor of *Sthaulya* besides dietary factors and psychological factors¹⁰.

Table No. 1: Aharatmaka Nidana of Sthaulya

<i>Aharatmaka Nidana</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.
<i>Atibhojana</i> (Overeating)	+	+	+	+	-	-
<i>Guru Aharasevana</i> (excessive consumption of heavy food)	+	-	-	-	-	-
<i>Sheeta Aharasevana</i> (Excessive consumption of cold diet)	+	-	-	-	-	-
<i>Snigdha Aharasevana</i> (Excessive consumption of	+	-	+	+	-	+

<i>Aharatmaka Nidana</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.
unctuous food)						
<i>Navanna Sevana</i> (Usage of fresh grains)	+	-	-	-	-	-
<i>Nava Madhyasevena</i> (Usage of fresh alcoholic preparation)	+	-	-	-	-	-
<i>Gramya Rasa sevana</i> (Usage of domestic animal's meat & soups)	+	-	-	-	-	-
<i>Paya Vikara Sevana</i> (Excessive usages of milk and its preparations)	+	-	+	+	-	-
<i>Dadhi Sevana</i> (Excessive use of curd)	+	-	-	-	-	-
<i>Sarpi Sevana</i> (Excessive use of ghee)	+	-	-	+	-	-
<i>Sleshmala Aharasevana</i> (Kapha increasing food)	+	+	-	-	+	+
<i>Ikshu Sevana</i> (Usage of sugarcane)	+	-	-	+	-	-
<i>Guda Vikara Sevana</i> (Usage of Jaggery's preparation)	+	-	-	-	-	-
<i>Mamsa Sevana</i> (Excessive use of meat)	+	-	+	-	-	-
<i>Shali sevana</i> (Excessive use of rice)	+	-	-	-	-	-
<i>Masha Sevana</i> (Excessive use of Phasiolus munga)	+	-	-	-	-	-
<i>Godhuma Sevana</i> (Excessive wheat)	+	-	-	-	-	-
<i>Audak Rasa Sevana</i> (Usages of aquatic animal's meat & soups)	+	-	-	-	-	-

Table No. 2: Viharatmaka Nidana of Sthaulya

<i>Viharatmaka Nidana</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.
<i>Avyayama</i> (Lack of physical exercise)	+	+	+	-	+	+
<i>Avyavaya</i> (Lack of sexual life)	+	-	+	-	-	-
<i>Divaswapa</i> (Day's sleep)	+	+	+	-	+	+
<i>Sukha Shaiya</i> (Luxurious sitting)	+	-	+	+	-	-
<i>Bhojanotar Snana Sevana</i> (Bathing after taking the meals)	+	-	-	-	-	-
<i>Gandhamalyanu Sevana</i> (Using of perfumes garlands)	+	-	-	-	-	-
<i>Svapna Prasangat</i> (Excessive sleep)	+	-	+	-	-	-

Table No. 3: Manasa Nidana of Sthaulya

<i>Manasika Nidana</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.
<i>Harshnityatvat</i> (Uninterrupted cheerfulness)	+	-	+	+	-	-
<i>Achintanat</i> (Lack of anxiety)	+	-	+	+	-	-
<i>Manasonivritti</i>	+	-	+	+	-	-
<i>Priyadarshana</i>	+	-	-	-	-	-
<i>Saukhyena</i>	-	-	-	+	-	-

Table No. 4: Anya Nidana of Sthaulya

<i>Anya Nidana</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.
<i>Amarasa</i>	-	+	-	-	-	+
<i>Snigdha Madhura Basti Sevana</i> (Administration of unctuous & Sweet enema)	+	-	+	+	-	-
<i>Tailabhyanga</i> (Massaging of oil)	+	-	+	+	-	-
<i>Snigdha Udvartana</i> (Unctuous unction)	+	-	-	-	-	-
<i>Bijadoshaswabhavat</i> (Heredity)	+	-	-	-	-	-

Role of Aharatmaka Nidana in Sthulya :

Acharya Sushruta has mentioned, *Sthaulya* and *Karshya* depend upon the quality and quantity of *Ahararasa*. So we can say that *Ahararasa* plays a major role for increasing *Meda Dhatu* in *Sthaulya*. On the basis of *Samanya Visheshha Siddhanta*, the excessive consumption of food having similar substance (*Dravya Samanya*), similar properties (*Guna Samanya*) or similar actions (*Karma Samanya*) to that of *Dhatu*, can produce the similar *Dhatu* in excess amount¹¹. In the same manners excessive intake of *Aharatmaka Nidana* which are described above causes over production of *Medodhatu*.

Role of Viharatmaka Nidana in Sthaulya:

All the *Viharatmaka Nindanas* having *Abhishyandi* properties like *Divaswapna* leads to blockage of the micro channels (*Srotas*) of the body, *Acharya* Charaka specially mentioned *Avyayama* and *Divaswapana* as *Nidana* of *Medovahasrotas Dushti*¹². Moreover, reduced metabolic rate during sleep is an important factor for production of excess fat.

Role of Manas Vyapara in Sthaulya:

In this era of modernization, physical activities of a person are decreased and mental workload is increased. As a result of that the diseases caused by psychogenic factors are extensively increased. In Ayurvedic classics *Acharya* have also mentioned some psychogenic factors responsible for *Sthaulya*. According to *Acharya* Charaka, *Harshanitya* and *Achintana* are two psychological factors responsible for *Sthaulya*. These factors are responsible for aggravation of *Kapha* and lead to *Meda* deposition.

Role of Beeja Dosha:

Acharya Charaka has mentioned that *Beeja Dosha* is responsible for *Sthaulya*. Defect of *Beejabhagavayava* i.e. a part of *Beeja*, which resembles with Gene, may lead to defective development of that organ. *Acharya* BhavaMishra has also mentioned that increased proportion of *Meda* and decreased proportion of *Shukra* in *Beeja* at the time of conception predisposes towards development of *Sthula* but weak body of offspring¹³.

Moreover, *Acharya* Charaka has mentioned that over nutrition particularly with *Madhura Rasa* during pregnancy is a causative factor for birth of obese child, which indicate the role of hereditary factor in genesis of *Sthaulya*¹⁴.

Purvarupa:

Purvarupa of *Sthaulya* has not been mentioned directly in any *Ayurvedic* classics. According to *Acharya* Charaka, *Purvarupa* of *Prameha* which are mentioned as *Medopradoshaja Vikara*, can be considered as *Purvarupa* of *Sthaulya*¹⁵. Again there is also a similarity in pathogenesis of *Prameha* and *Sthaulya*. *Bahudrava Shleshma* and *Abaddha Meda* are the two morbid components involved in pathogenesis of *Prameha*¹⁶, which are also provoked in *Sthaulya*. So, *Shleshma Sanchya* and *Medodushti* related *Purvarupa* of *Prameha* and *Medo Dushtijanya Vikara* described by *Acharya* can be considered as *Purvarupa* of *Sthaulya*. The symptoms related with *Meda Dushti* can be considered as *Purvarupa* of *Sthaulya* like *Atinidra*, *Tandra*, *Alasya*, *Visra Shariragandha*, *Angagaurav*, *Shaithilya* etc.

Rupa:

Rupa of a disease are the prominent parameters for its diagnosis. During *Rupaavastha* of the disease, *Dosha-Dushya Sammurchhna* is completed. The symptoms of *Sthaulya* are explained by different *Acharya* in detailed manner.

According to *Acharya* Charaka, in *Sthaulya* fat and flesh increased in inordinate manner which results in pendulous buttocks, abdomen and breast. This increased bulk reduces the corresponding increase in energy. So, the person has become less enthusiastic in his physical activities. *Acharya* Kashyapa also mentioned *Atisthula Jangha Pralanga*, *Nitamba* and *Udara* as despicable signs of *Atisthula*¹⁷. Besides these cardinal symptoms, *Acharya* has also mentioned eight disabilities of *Sthaulya*¹⁸, which are as follow:

- *Ayushohrasa* - Life expectancy will be decreased because *Dhatu* other than *Medo Dhatu* could not get proper nutrition.
- *Javoparodha* - Due to *Shaithilya*, *Saukumaryata* and *Guru* Properties of *Medodhatu*, it causes *Javoparodha*.
- *Kricchavyavaya* - Due to obstruction in genital passage by *Dushta Meda* and less production of semen the process of reproduction becomes difficult.
- *Daurbalya* - This results because of malnourishment of the *Dhatu*.
- *Daugandhya* - Bad odour is result of excessive sweating, innate property of *Meda* and morbid nature of vitiated *Meda*.

- *Svedabadha* - Distressful sweating is result of admixture of *Kapha* with *Meda*, *Vishyandi*, *Bahutva* and *Guru* Properties of *Meda*. Its inability to bear the strain of exercise results in *Svedabadha*.
- *Kshudhatimatrata* and *Pipasatiyoga*: Because of increased *Agni* in *Koshtha* and vitiation of *Vata* by obstruction due to *Meda* results in excessive appetite and thirst.

All the symptoms of *Sthaulya* described in various *Ayurvedic* texts have been summarized in the following table.

Table No.6: Rupa of Sthaulya

Rupa	Ch.¹⁹	Su.²⁰	A.S.²¹	A.H.	M.N.²²	B.P.	Y.R.
<i>Chala Sphika</i>	+	-	+	+	+	+	-
<i>Chala udara</i>	+	-	+	+	+	+	-
<i>Chala stana</i>	+	-	+	+	+	+	-
<i>Ayatha Upachaya</i>	+	-	+	-	+	+	-
<i>Anutsaha</i>	+	-	+	-	+	+	-
<i>Ayushohrasa</i>	+	-	-	-	-	+	-
<i>Javoparodha</i>	+	-	-	-	-	+	-
<i>Kricch Vyavaya</i>	+	-	-	-	-	-	+
<i>Daurbalya</i>	+	-	+	-	-	-	-
<i>Daurgandhya</i>	+	+	+	-	+	+	+
<i>Svedabadha</i>	+	-	-	-	-	-	+
<i>Kshudhatimatra</i>	+	+	+	-	+	+	+
<i>Pipasatiyoga</i>	+	+	+	-	+	+	+
<i>Kshudra svasa</i>	-	+	+	-	+	+	+

<i>Rupa</i>	Ch. ¹⁹	Su. ²⁰	A.S. ²¹	A.H.	M.N. ²²	B.P.	Y.R.
<i>Nidradhikya</i>	-	+	+	-	+	+	+
<i>Gatrasada</i>	-	+	-	-	+	+	+
<i>Gadgadvani</i>	-	+	+	-	-	-	-
<i>Krathana</i>	-	+	-	-	+	+	+
<i>Alpaprana</i>	-	+	+	-	+	+	+
<i>Survakriyasu Asamarthata</i>	-	+	-	-	+	+	-
<i>Alpavyavaya</i>	-	+	-	-	+	+	-
<i>Kasa</i>	-	+	-	+	-	-	-
<i>Shvasa</i>	-	+	+	-	-	-	-
<i>Snigdhangata</i>	-	+	-	+	-	-	-
<i>Udaraparshva vridhhi</i>	-	+	-	+	+	+	-
<i>Alasya</i>	-	-	+	-	-	-	-
<i>Ama</i>	-	-	-	+	-	-	-
<i>Moha</i>	-	-	-	-	+	+	+
<i>Saukumarata</i>	+	+	-	-	-	-	-
<i>Anga saithilya</i>	+	+	-	-	+	+	-
<i>Alpabala</i>	-	-	+	-	-	-	-

Samprapti:

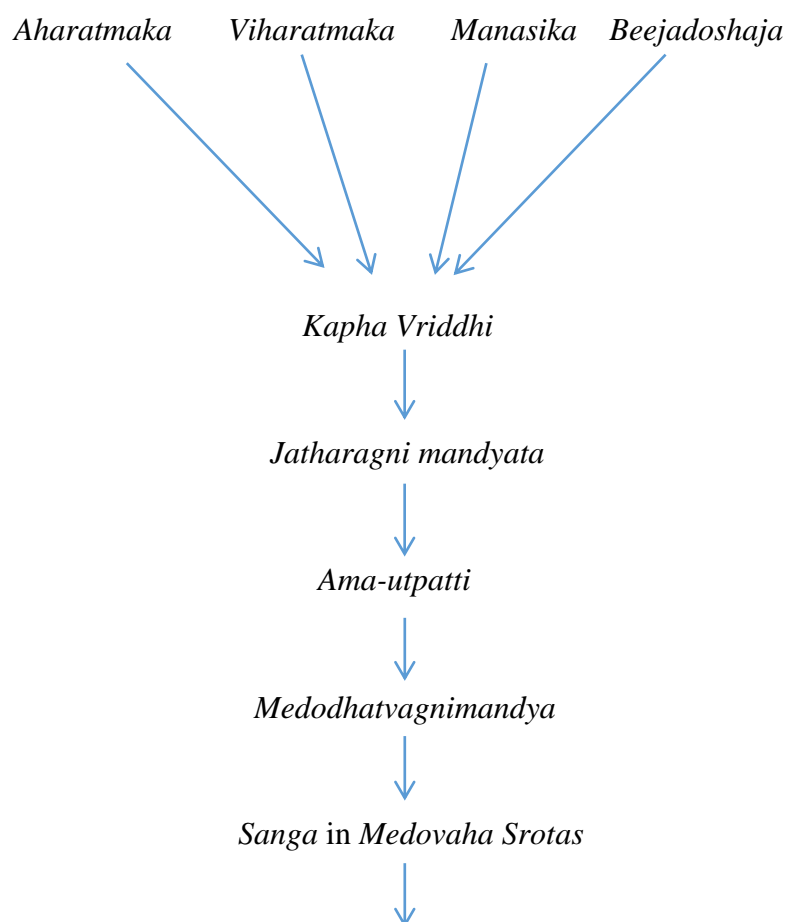
Samprapti of a disease is the mode of occurrence of the disease from *Nidana Sevana* to manifestations of disease. The knowledge of *Samprapti* explicit the specific features of a disease like *Dosha*, *Dushya*, *Srotodushti*, *Samata* or *Niramata* and *Agni*. *Acharya* Charaka has accepted “*Ahara*” where as *Acharya* Sushruta has accepted *Amadosha* as most common pathogenic factor for *Medovriddhi* in *Sthaulya*.

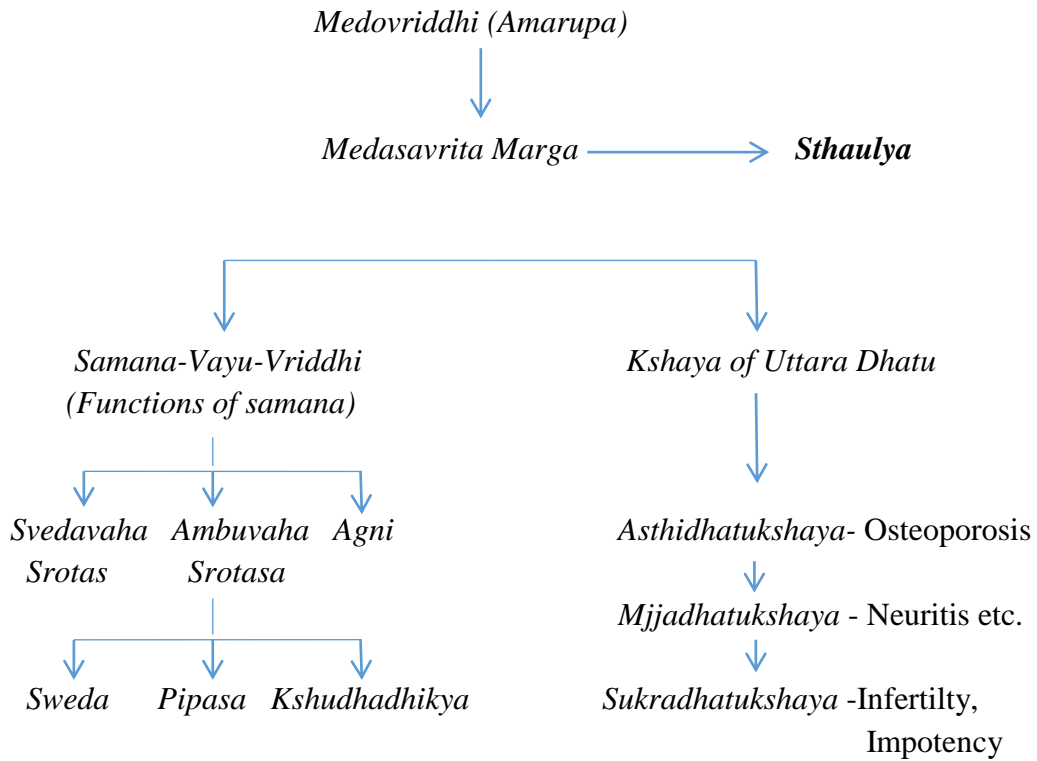
According to *Acharya* Charaka, Due to obstruction of *Srotas* by vitiated *Meda*, *Vata* move into *Koshtha* and increases the *Agni*, which absorbs the food fastly. The corpulent person digests the food speedily and craves for food inordinately. Over eating produces more *Rasa*, which results in over production of *Meda Dhatu*, which leads to *Sthaulya*.

According to *Acharya* Sushruta *Ama Rasa* produced due to intake of *Kaphavardhaka Ahara*, *Adhyshana*, *Avyayama* and *Divaswapana*. The *Madhura Bhava Ama Rasa* circulates with in the body and *Snigdhansha* of this *Ama Rasa* causes *Medovriddhi* which results in excessive stoutness²³.

The whole process of the manifestation of disease is given here in schematic form.

Samprapti



**Samprapti Ghataka:**

<i>Dosha</i>	: <i>Tridosha, Samanavayu, Apanavayu, Vyanvayu, Pachaka Pitta, Kledakkapha</i>
<i>Dushya</i>	: <i>Rasa and Meda</i>
<i>Srotasa</i>	: <i>Annavaha, Rasavaha, Mamsavaha, Medovaha</i>
<i>Srotodushti</i>	: <i>Sanga, Vimargagaman, Avarana</i>
<i>Agnimandya</i>	: <i>Medodhatvagnimandya, Jatharagnimandya</i>
<i>Ama</i>	: <i>Medodhatugata</i>
<i>Pradhanata</i>	: <i>Dhatvagnimandya, Santarpanjanya</i>
<i>Udabhavasthana</i>	: <i>Amasaya</i>
<i>Sanchara</i>	: <i>Rasayani</i>
<i>Adhithana</i>	: <i>Whole body specifically Udara, Sphika, Stana</i>
<i>Roga Marga</i>	: <i>Bahya</i>
<i>Swabhava</i>	: <i>Chirakalin</i>

Pathogenesis:

Dosha: Mainly *Sthaulya* is a *Kapha* predominant *Vyadhi* but *Pitta* and *Vata* are also involved in the pathogenesis of *Sthaulya*. So we can say that all the three *Dosha* collectively participates in the process of pathogenesis in *Sthaulya*.

Kapha: Acharya Charaka has mentioned *Sthaulya* under *Shleshma Nanatmaja Vyadhi*²⁴. Due to excessive intake of *Madhura*, *Snigdha*, *Guru*, *Picchila*, *Sheeta* and *Abhishyandi Ahara* and following *Vihara* like *Diwasvapna*, *Achintana* etc *Kapha Dosha* get vitiated. Most of the symptoms of *Sthaulya* are also of *Kaphavriddhi Janya* i.e. *Alasya*, *Angagaurava*, *Gasrasada*, *Nidradhikya* etc. Usually the patients of *Sthaulya* belong to *Kapha Pradhanya Prakriti*.

Pitta: In *Sthula* person, *Pitta Dushti Lakshana* are very less but most of them have *Tikshnagni*. Which is also caused by *Pitta Dosha* Moreover symptoms like- *Kshudhadhikya*, *Atipipasa*, *Swedadhikya*, *Dauragandhya* have also been mentioned in the *Pitta Vriddhi Lakshana*.

Vata: *Vata* causes two conditions in *Sthaulya*. First condition is of *Avrita Vata* which provokes the *Agni*, it causes absorption of food speedily, ultimately demand of food increases. Second is inactiveness of *Vyana Vayu*. *Vyana Vayu* is responsible for proper circulation and distribution of *Ahara Rasa* to *Dhatu*. Due to, *Sanga* or *Margavrodha* in *Medovaha Srotas* the *Ahara Rasa* cannot be circulated properly to their respective *Dhatu* by *Vyana Vayu*. Hence, involvement of *Samana Vayu* can be clearly postulated with the evidence of *Agnisandhukshana* and involvement of *Vyan Vayu* can be proved by improper distribution of fat in the body.

Dushya: *Doshadushya Sammurchchhana* is a necessary phenomenon in the occurrence of any disease. Acharya Sushruta has mentioned *Sthaulya* as a *Dushya* dominant *Vyadhi* (Su.Su.24/9) and in *Sthaulya* the excessive production of abnormal *Meda Dhatu* is clearly visualised. Here, *Dhatu* except *Rakta* and *Asthi* i.e. *Rasa*, *Mamsa*, *Meda*, *Majja* and *Shukra* are *Dushya* as *Kapha* is seated in all these *Dhatu* on the basis of *Ashrayashrayeebhava*. So, vitiation of *Kapha* can also lead to vitiation of above *Dushya Dhatu*. Here excessive intake of *Guru*, *Snigdha*, *Madhura*, *Sheetadi Guna* dominant diet is also responsible for accumulation of excessive *Medha* in *Sthaulya*.

Srotas: In *Sthaulya*, along with other *Srotasa*, mainly *Medhovaha Srotasa* is involved. *Avyayama*, *Diwasvapna*, excessive intake of fatty substances and *Varuni* are the factors responsible for *Medovaha Srotodusti* as mentioned in Charaka Samhita. In *Sthaulya* accumulation of *Meda* in excess amount clearly indicates the involvement of *Medovaha srotas* along with *Rasavaha Srotasa*. *Atisweda* and *Daurgandhya* indicate the involvement of *Swedavaha Srotasa*. Presence of *Atipipasa* indicates the involvement of *Udakavaha Srotasa*. In the pathogenesis of *Sthaulya*, increased fat deposition inside the muscle (*Vasa*) indicates the involvement of *Mamsavaha Srotasa*.

Agni:

Jatharagni: In *Sthaulya* due to obstruction in the pathway of *Vata* by *Meda*, *Vata* remains in the *Kostha* and causes *Tikshnagni*. Here a question arises that how *Ama* can be produced in the presence of *Tikshnagni*. Chakrapani and Dalhana have tried to clarify this controversy by giving explanation that in the stage of *Tikshnagni*, person goes for *Adhyasana* and *Kalavyatita Ahara Sevana*, which causes disturbance in *Agni*, and subsequently formation of *Ama* take place.

Moreover, *Dalhana* has also explained that in the *Sthaulya* formation of *Ama* is more due to *Dhatvagni Mandya* of *Medodhatu* than the *Jatharagni*²⁵.

Dhatvagni: As per *Acharya Vagbhata*, *Pachakansa* present in *Dhatu* is known as *Dhatvagni*. *Ushma* presents in each *Dhatu* is part of *Jatharagni* and is also controlled by *Jatharagni* itself. *Dhatvagnimandya* of specific *Dhatu* causes *Vridhhi* of that *Dhatu* and vice versa. In this state of *Dhatavagnimandya Kshaya* of *Utterotara Dhatu* takes place. In case of *Sthaulya Medo Dhatvagni* got vitiated which causes over production of vitiated *Medo Dhatu* and it ultimately results in *Kshaya* of *Uterotara Dhatu* like *Asthi*, *Majja* and *Shukra*.

Upadrava:

In the later stage of pathogenesis due to ignorance and mismanagement of the disease, some new symptoms appear beside the main symptoms of the disease. These are known as *Upadrava* or complications of the disease. *Acharya Charaka* has mentioned high intensity and severity of *Sthaulya* due to *Atikshudha* and *Atipipasa*. He also mentioned manifestations of severe complications and even death due to its ignorance with example of *Davanala*²⁶. *Updrava* of *Sthaulya* mentioned by different *Acharya* are as follow:

Table No. 7: Updrava of Sthaulya

<i>Updrava</i>	Ch.	Su.	A.S.	A.H.	M.N.	B.P.	Y.R.
1) <i>Prameha</i>	-	+	+	+	+	+	-
2) <i>Prameha pidika</i>	+	+	+	-	-	-	+
3) <i>Jvara</i>	+	+	+	+	+	+	+
4) <i>Bhagandara</i>	+	+	+	+	+	+	+
5) <i>Vidradhi</i>	+	-	+	-	-	-	+
6) <i>Vata vikara</i>	+	-	-	-	-	-	+
7) <i>Udara roga</i>	-	+	+	+	-	-	-
8) <i>Urustambha</i>	-	+	+	-	-	-	-
9) <i>Shwasa</i>	-	+	+	-	-	-	-
10) <i>Apachi</i>	-	-	-	+	+	+	-
11) <i>Kasa</i>	-	-	-	+	+	+	-
12) <i>Sanyasa</i>	-	-	-	+	-	-	-
13) <i>Kushtha</i>	-	-	-	+	+	+	-
14) <i>Visarpa</i>	-	-	-	-	+	+	-
15) <i>Atisara</i>	-	-	-	-	+	+	-
16) <i>Arsha</i>	-	-	+	-	+	+	-
17) <i>Shlipada</i>	-	-	-	-	+	+	-
18) <i>Kamala</i>	-	-	-	-	+	+	-
19) <i>Mutrakricchra</i>	-	-	-	+	-	-	-
20) <i>Ajirna</i>	-	-	-	+	-	-	-

Sadhya – Asadhyata:

Sthaulya is a *Kricchrasadhya Vyadhi*. Most of the *Acharya* have described bad prognosis of *Sthaulya* and *Sahaja Sthaulya* is considered incurable. *Acharya Charaka* has also described the fact that the treatment of *Sthaulya* is more difficult than *Karshya*²⁷. *Acharya Charaka* has also mentioned in *Chikitsa Sthana* about bad prognosis for *Sahaja* (hereditary) disease²⁸. Hence *Sahaja Sthaulya* can be considered as *Asadhya*.

Chikitsa:

According to *Acharya Charaka* General Principle of management of any disorder in *Ayurveda* is divided into three parts- 1) *Nidana Parivarjana*, 2) *Sanashodhana*, 3) *Sanshamana*

1) ***Nidana Parivarjana***- This is the first line or most important part of treatment. For the management of *Sthaulya* also *Nidana Parivarjana* has significant importance. This indicates that the root of *Samprapti* process, i.e. *Nidana* must be avoided for proper management of the disease. *Aharatmaka*, *Viharatmaka*, *Mana* and other causative factors comes under *Nidana* are responsible for pathogenesis of the disease should be avoided.

2) ***Samshodhana Therapy***- *Shodhana* means *Apakarsana* or removal of *Dosha* from the body. There are two main parts of *Shodhana* therapy.

Bahya Samshodhana: Different *Acharya* have mentioned external purification therapy for the management of *Sthaulya*. *Ruksha Udavartana* was advised by *Acharya Charaka*²⁹ and *Acharya Vagbhata* for the management of *Sthaulya*³⁰. The benefits of *Udavartana* are also mentioned i.e. *Kaphahara*, *Medasa Pravilayanam*, *Sthirikaranam Angama* etc. In *Sthaulya Udavartana* should remove foetid odour and restrict excessive sweating.

Abhyantara Samshodhana: Being a syndromic entity *Samshodhana* therapy is highly recommended for *Sthaulya* by *Acharya Charaka*. According to *Acharya Vagbhata*, patients of *Sthaulya* with *Adhika Dosha* and *Adhik Bala* should be treated by *Samshodhana* therapy including *Vamana*, *Virechana*, *Niruha*, *Raktamokshana* and *Shirovirechana*³¹. *Ruksha- Ushna & Teekshna Basti* are also useful.³² *Snehana Karma* is always restricted for the patients of vitiated *Meda* like *Sthaulya*³³. However, *Lekhaniya* property of *Taila* is described³⁴ and oil is suitable for patients with *Pravridha Kapha-Medha*^{35&36} is mentioned in *Ayurveda*. So, on exigency usage of *Taila* is recommended for *Sthula* patients.

3) ***Samshamana Therapy***: The therapy which could not excrete the *Dosha* from the body but maintain equilibrium of vitiated *Dosha* in the body is called as *Samshamana*. Among *Shada Upakarma*, *Langhana* and *Rukshana* can be administrated to the patient of *Sthaulya* for *Samshamana* purpose³⁷. *Shamana Chikitsa* can be implemented through seven different ways. *Deepana*, *Pachana*, *Kshudha Nigradhna*, *Marutsevana*, *Atapasevana*, *Trisha Nigraha*, *Vyayama*. All these seven procedures can be described under single title i.e. “*Shamana Langhana Chikitsa*”. *Apatarpana* or *Langhana Karma* is advised in *Samtarpanajanya Vyadhi*³⁸, in *Amashyotha Vikara*, in *Shleshmaja Vikara*, in *Rasaja Vikara* and it is the best treatment for the

Sama condition of disease. So, all seven types of *Langhana* can be used to the patients of *Sthaulya* according to *Rogi-Roga Bala*.

In Charaka Samhita following treatment protocol is advised for the patients of *Sthaulya* is that administration of *Dravya* having *Guru* and *Aptarpana* properties and also possess additional *Vata*, *Shleshma* and *Medohara* properties is considered as an ideal *Samshamana* therapy for *Sthaulya*. *Acharya* Chakrapani has explained that *Guru* Property is sufficient to suppress the vitiated *Agni* and *Aptarpana* property leads to depletion of *Meda*. For example *Madhu* possess *Guru* and *Ruksha* properties, hence it is ideal for management of *Sthaulya*³⁹. *Gangadhara* has interpreted it that *Guru* property is suitable to suppress *Tikshnagni* and vitiated *Vata* especially *Kosthagata Vata* which give relief from *Atikshudha* and *Aptarpana* property cause reduction of *Meda* due to under nourishment.

Again *Santarpana* and *Aptarpana* are two opposite *Upakrama* and its resultant disorders *Sthulata* and *Krishata* are two opposite conditions. So, causative factors of *Karshya* i.e. *Ruksha Annapana*, *Langhana*, *Prमितasana*, *Shoka*, *Nidravegavinigraha*, *Rukshasana*, *Ruksha Udavartana*, *Krodha* etc. are the etiological factors of *Karshya* which can be practiced as line of treatment for *Sthaulya*⁴⁰.

Some *Samsamana Yoga* like *Guduchi*, *Bhadramusta*, *Triphala*, *Takrarista*, *Makshika*, *Vidangadi Lauha*, *Bilvadipanchmula* and *Shilajatu* with *Agnimantha Svarasa* are advised for prolonged period (*Ch. Su.* 21/21-24). Also, treatment of *Sthaulya* is mentioned at different places in *Charaka Samhita*. Drugs and preparations like *Karshana Yavagu* of *Gavedhuka* (*Ch.Su.* 2/25), *Lekhaniya Mahakashaya* (*Ch.Su.*4/3), *Bibhitaka* (*Ch.Su.*27/148), *Venuyava* (*Ch.Su.*27/20) and *Madhudaka* (*Ch.Su.* 27/323) are advocated as *Medonashaka* and *Lekhaniya*. *Akasha* and *Vayavya Mahabhuta* dominant *Dravya* are attributed to have *Laghavakara* action (*Ch.Su.* 26/11), so *Akasha* and *Vayavya Mahabhuta* dominant articles can be used for management of *Sthaulya*. *Katu* and *Kashaya Rasa* are having *Karshana*, *Upchayahara* properties, while *Tikta Rasa* is having *Lekhana* and *Medoupshoshana Karma* (*Ch.Su.* 26/43) hence *Katu*, *Tikta* and *Kashaya Rasa* dominant drugs can be used for treatment of *Sthaulya*.

In Sushruta Samhita, administration of *Virukshana* and *Chedaniya Dravya* especially *Shilajatu*, *Guggulu*, *Gomutra*, *Triphala*, *Loha Raja*, *Rasanjana* and *Madhu* in proper dose and duration are advised (*Su.Su.* 15/38). Here, *Dalhana* has explained that *Virukshana* property helps to reduce *Meda* and *Chhedaniya* property helps to remove obstruction from body channel, particularly from *Medovaha Srotas* by its *Srotovishodhana* property. In 38th chapter of *Sutrasthana* various groups of drugs like *Varunadi Gana*, *Salasaradi Gana*, *Rodhradi Gana*, *Arkadi Gana*, *Muskadi Gana*, *Trayusnadi Gana* etc. are mentioned as *Medonasaka*. *Haritaki* is advised for the treatment of *Santarpanajanya Roga* (*Su.Su.* 44/69) and *Amalaki* is mentioned as *Medopahama* (*Su.Su.* 44/70). So, *Haritaki* and *Amalaki* can be used for treatment of *Sthaulya*. *Karpura* (*Su.Su.*46/203), *Kansya* (*Su.Su.*46/330), *Trapusisa* (*Su.Su.*46/331), different *Mani*

(Su.Su. 46/332) are described as *Lekhana* and *Medohara*, which can be used for treatment of *Sthaulya*.

In Ashtanga Samgraha *Madanphaladi Churna*, *Kutajadi Churna*, *Hingvadi Churna* and *Vidangadi Mantha* are added in line of treatment (A.S.Su. 24/37-46). *Krisna Lauha* (A.S.Su.12/174-178), *Sankha* and *Samudraphena* (A.S.Su. 12/22), *Tuttha* (A.S.Su. 12/23), *Manahsila*, *Anjana* (A.S.Su. 12/24-25) and *Silajatu* (A.S.Su. 16/17) are additional *Dhatu* described as *Lekhana* and *Medonasa*. *Rasanjana* is mentioned as the best for the treatment of *Sthaulya* while *Guggulu* is mentioned as the best for the disorders of *Meda* and *Vata* (A.S. Su. 13/3), so *Guggulu* can be used for the treatment of *Medavrita Vata* condition.

In Astanga Hridaya, *Gomutrapaki Haritaki* (A.H.Chi. 8/55-56), *Rodhrasava* (A.H.Chi. 12/28), *Navaka Guggulu* (A.H.Chi. 21/50), *Amrita Guggulu* (A.H.Ut. 28/38), *Vardhamana Bhallataka Rasayana* (A.H.Ut. 39/66-71) etc. are the various preparations added for the management of *Sthaulya*.

Bhavaprakasha has mentioned the remedies for *Medohara* purpose *Chavyadi Saktu* (39/15), *Triphaladya Churna* (39/16), *Erandpatra Kshara* (39/23), *Badaripatra Peya* (39/25), *Amritadi Guggulu* (39/27), *Dasanga Guggulu* (39/28), *Trayusnadi Guggulu* (39/29), *Lauha Rasayana* (39/30-40), *Lauharishta* (39/41-48) etc.

In Bhisajyaratnavali *Vidangadi Churna*, *Vyosad Saktu*, *Sthaulyahari Peya*, *Amritadyo Guggulu*, *Navaka Guggulu*, *Lauha Rasayana*, *Trifaladya Taila*, *Harital Yoga*, *Trayusdadi Lauha*, *Vidangadi Lauha*, *Vadvagni Lauha* and *Rasa*, *Mahasugandadyhi Taila*, *Loharistha* etc. are the various preparations added for the management of *Sthaulya*.

Besides these, various type of *Churna*, *Kwatha* and herbal as well as herbo mineral *Yoga* are mentioned by various *Acharya*.

Dose, duration and methods of treatment:

Ashtanga Samgraha mentioned the *Pragabhakta Kala* for drug administration i.e. before meal. It has been further elaborated by Sharangadhara and advised to take *Lekhana* drug empty stomach in early morning and before a meal⁴¹. So, for the treatment of *Sthaulya* medicine should be administered before meal and ideally in the morning time empty stomach. The use of *Avisadakara*, *Mridu* and *Sukhkara Aushadha* in gradual increasing dose with caution is advised for *Sthula* patients. Further it has been emphasize to consider *Agni Bala*, *Deha Bala*, *Dosha Bala* and *Vyadhi Bala* prior to fixation of dose and duration of treatment for *Sthaulya*. It has been advised in *Charaka Samhita* to follow constant and prolonged therapeutic intervention for management of *Sthaulya*.

Pathya- Apathya: Keeping in view, pathological factors, the ancient *Acharya* have listed numerous *Pathya*, *Apathya* for *Sthaulya*.

Table No.9: Pathya-Apathya Ahara

<i>Ahara Varga</i>	<i>Pathya</i>	<i>Apathya</i>
1. Shuka Dhanya (Cereal grain)	<i>Puran Shali, Kodrava, Shyamaka, Yava, Priyangu, Laja, Nivara, Coradushaka, Jurna, Prashatika, Anguni</i>	<i>Godhum, Naveen Dhanya (Shali)</i>
2. Shami Dhanya (Pulses)	<i>Mudga, Rajmasha, Adhaki, Kulattha, Chanaka, Masura, Makusthaka</i>	<i>Masha, Tila</i>
3. Shaka Varga (Vegetables)	<i>Patol, Shigru, Vrutaka, Katutikta Rasatmaketc, Evaruka, Adraka, Mulaka, Surasa, Grajjana</i>	<i>Kanda Shaka, Madhura, Rasatmak</i>
4. Phala (Fruits)	<i>Kapittha, Jambu, Amalki, Ela, Bibhitaki, Haritaki, Maricha, Pippali, Eranda, Karkati, Ankola, Narangi, Bilvaphala.</i>	<i>Madhura Phala</i>
5. Dravya	<i>Honey, Takra, Ushanajala, Tila & Sarshapa Tail, Ashava-Arista, Surasava, Jeerna Madhya</i>	<i>Milk Preparations, (Dugdha, Dhadhi, Sarpi) Ikshuvikara</i>
6. MamsaVarga	<i>Rohit Matsya</i>	<i>Anupa, Audaka, Gramya Mamsa Sevana</i>

Table No.10: Pathya-Apathya Viharav(Physical Regimen)

<i>Pathya</i>	<i>Apathya</i>
<i>Shrama</i>	<i>Sheetala Jala Snana</i>
<i>Jagarana</i>	<i>Divaswapa</i>
<i>Vyavaya</i>	<i>Avyayama</i>
<i>Nitya Bhramana</i>	<i>Avyavaya</i>
<i>Ashwa Rohana</i>	<i>Sukha Shaiya</i>
<i>Hastyava Rohana</i>	<i>Ati Ashana</i>

Table No.11: Pathya - Apathya Vihara (Mental Regimen)

<i>Pathya</i>	<i>Apathya</i>
<i>Chinta</i>	<i>Nitya Harsha</i>
<i>Shoka</i>	<i>Achintana</i>
<i>Krodha</i>	<i>Manso Nivritti</i>

If we take a brief insight into the pathophysiology of *Sthaulya Laghu Anna* and *Vyayama* (Physical activity) has major roles in the management of *Sthaulya*. Therefore *Pathya* and *Apathya* should be strictly carried out by obese patients for fruitful results.

Conclusion:

Obesity as an important public health problem has been discussed in recent few decades worldwide. Excessive accumulation of *Kapha* and *Meda* with other casuative factors leads to *Sthaulya Roga*, so specific management and lifestyle modification is beneficial in obesity. Drugs having properties of *Ushna*, *Laghu*, *Ruksha Guna* and *Deepana*, *Kapha-Vatahara* and *Sthaulyahara Karma* are expected to increase the power of *Rasa* and *Medadhatvagni*, decrease in *Kapha* and *Vata* and thus decrease in further formation of *Aama Medadhatu* and its deposition in body results in improvement in *Sthaulya*. Thus, with detailed case history and case analysis, personalized Ayurvedic care is useful in management of *Sthaulya* and its complications.

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