

THE CONCEPTUAL STUDY OF STHAULYA W.S.R TO OBESITY**Seema Sakharam^{1*} and Manjiri S.²**¹Marade- 3rd Year MD Scholar, Tilak Ayurved Mahavidyalaya, Pune.²Deshpande- MD., Ph.D (Rognidan), Tilak Ayurved Mahavidyalaya, Pune.Article Received on
21 Sept. 2021,Revised on 11 October 2021,
Accepted on 01 Nov. 2021

DOI: 10.20959/wjpr202113-22249

Corresponding Author*Dr. Seema Sakharam**Marade- 3rd Year MD
Scholar, Tilak Ayurved
Mahavidyalaya, Pune.**ABSTRACT**

Ayurveda is one of the most ancient medical sciences of the world. It conceives and describes the basic and applied aspects of life process, health, disease and its management in terms of its own principles and approaches. In Ayurveda, Sthaulya has been described since very early days in various Samhitas, Sangraha Granthas etc. Acharya Charaka has described Sthaulya among the eight Nindita Purusha and Santarpanajanita Roga. The term Medasvi is suggestive of nutritional status of the individuals indicating a well-nourished disposition rather than disease. Sthaulya is involving the Medovridhhi which deals with study of typical obesity that is a reflection of endocrine imbalance, not

with the reasonal adiposity. Obesity is the most common nutritional (metabolic) disorder in wealthy societies. Sthaulya (obesity) is discouraged by the society for social as well as medical reason. Commonly obesity is due to excessive eating and lack of adequate exercise. Dalhana seems to be more explicit while commenting on a Medo Roga specified that Agni which is involved in pathogenesis of the disease viz. Dhatvagnimandya. In pathogenesis of Sthaulya, Kledaka Kapha, Samana & Vyana Vayu, Meda (fat /lipid) and Medodhatvagni Mandyata are main responsible factors. So, after looking the vital importance of obesity (Sthaulya), it is selected for the present conceptual study.

INTRODUCTION

In 21st century, every person is running after life's goal. Hence, does not have time to think and act for the healthy life and does not able to follow the proper Dinacharya, Ritucharya, dietetic rules & regulations. Because of this artificial living life-style, person has gotten so many disorders for himself. Sthaulya (obesity) is one of them. Sthaulya is one of the most effective disease which affect someone's social, physical and mental features. Acharya Charaka listed eight defects underlying- Sthaulya Purusha, Ayuhrasa, Javopradha, Alpa-

vyavayita, Daurbalya, Daurgandhya, Swedabadha, Ati trisha, Ati-kshudha. Hence the management of this disease is merely insufficient in other systems of medicine and patients are continuously looking with a hope towards Ayurveda to overcome this challenge.

The World Health Report of W.H.O. listed obesity under the 10 top selected risks to the health. The incidence of Diabetes mellitus, hypertension, angina pectoris, and myocardial infection is higher among obese individuals. It is frequently blamed on ingestion of heavy and over food, endocrine factors, body built or heredity etc. BMI (Body Mass Index) more than 27 indicate increasing risk of health.

Here, I tried to highlight how can body's physiological entities turn in pathological state & responsible for disease (Sthaulyata).

Definition of 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 and abnormal distribution of Meda with reduced enthusiasm towards life is called Atisthula.^[1] Obesity is an increase in body weight beyond the limitation of skeletal and physical requirements as the result of excessive accumulation of body fat.^[2]

Classification

Vagbhata have been mentioned three types of Sthaulya i.e., Adhika, Madhyama and Hina with management point of view.^[3]

- (1) **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 Hina Sthaulya.
- (2) **Madhyam sthaulya:** (B.M.I. 30-40 kg/m² -Obese) Moderate degree, with least complications without secondary disease, with less than eight undesirable symptoms and duration of 1 to 5 years can be considered as Madhyam Sthaulya.
- (3) **Adhika sthaulya:** (B.M.I. > 40 kg/m² -Very Obese) Excessive degree, with complication and secondary disease with all eight undesirable symptoms and duration of more than 5 years can be considered as Adhika Sthaulya.

Nidana (Etiological factors)

All the etiological factors can be classified into four groups:

Atisampuranat: Excessive indulgence in various diet articles

Avyayamat: Less physical activities

Manasaja: Psychological

Beejadoshaj: Genetic / Hereditary defect

Role of aharatmaka nidana

Ahara rasa plays a major role in increasing Medadhatu in Sthaulya. So, Acharya Sushruta has mentioned, Sthaulya and Karshya depends upon the quality and quantity of Ahara rasa.^[4] On the basis of Samanya Vishesh Siddhanta and Ashraya-ashrayi Sambandha the excessive consumption of Kapha Vriddhikara Ahara causes the over production of Rasadhatu with further over production of Medodhatu.

Role of viharatmaka nidana

All the Aharatmaka Nidana ultimately decreases physical activity, which aggravates Kapha and leads to Meda deposition. Viharatmaka Nidana like Diwaswapa having Abhishyandi property leads to blockage of the micro channels of the body, specifically in Medovaha strotas. Moreover, reduced metabolic rate during sleep is an important factor for genesis of excess fat.

Role of manas vyapara

Due to adaptation of modern lifestyle, a person has reduced his physical activity and instead of that, the mental work is increased. Sthaulya is also considered under the group of psychosomatic diseases. Harshanitya (Excessive pleasure) and Achintana (jolliness) are two psychological factors mentioned by Acharya Charaka, which are responsible for Kapha aggravation and lead to Meda vriddhi. With this type of psychological well-being and jolliness that person indulges more in worldly pleasure and excess energy stored in the form of Meda.

Role of beejadosha

Acharya Charaka has mentioned that Beejadosha plays a major role for Medovriddhi. Defect of Beejabhag avayava 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 fleshy 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.

Samprapti (Pathogenesis)

Vitiation of few basic component of body is required for the manifestations of any disease which are as follows:

1. Dosha
2. Dushya
3. Strotas
4. Agni and Ama

1. Dosha: In pathogenesis of Sthaulya, all three Doshas are vitiated.

a) Kapha: Sthaulya is described by most of Ayurvedic classical text as Shlesma Nimitaja Vyadhi. So Kapha is main Dosha in pathogenesis of the disease. Excessive consumption of Ahara like Guru, Snigdha, Madhura, Sheeta, Picchila; Vihara like Avyayama, Divaswapna etc. and Manasika Nidana like Achinta, Nitya Harsha etc.; leads to vitiation of Kapha. Most of symptoms of Sthaulya come under the category of Kapha Vriddhi (Prakopa). i.e., Alasya, Gatrasada, Angagaurava, Nidradhikya etc. Usually, Sthaulya Rogi 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).

b) Pitta: In obese persons, Pitta also remains in higher sight because the symptoms of Sthaulya like Ati Kshudha, Ati Pipasa, Swedadhikya, Daurgandhya have also been in mentioned in the Pitta Vriddhi. Mainly the Pachaka pitta is involved in aetiopathogenesis of the disease.

c) Vata: In this disease, Vata has been mentioned in the state of Avrita in kostha, which makes the Agnivaishamya, ultimately increases the Abhyavaharana Shakti or demand of food. The process of circulation, digestion and proper distribution of Dhatus are controlled by Samana and Vyana Vayu. Hence, involvement of Samana Vayu can be clearly postulated with the evidence of Agni Sandhukshana and improper distribution of fat in the body proves the involvement of Vyana Vayu.

2. Dushya

Acharya Sushruta has mentioned Sthaulya as a Dushya dominant disease and in this disease the excessive production of abnormal Medadhatu is clearly visualized. Kapha is seated in

Meda along with other Dhatus. So, on the basis of Ashraya-ashrayi bhava vitiation of Kapha also lead to vitiation of that Dhatu in which Kapha seated. Moreover, excessive consumption of such Guna dominant diet forms that specific Guna dominant Poshaka Annarasa. This specific Dhatu poshakansha in excessive a quality and quantity increased the particular Dhatu. In disease Sthaulya excessive intake of Guru, Snigdha and Madhuradi Guna dominant diet increase accumulation of Medodhatu.

3. Strotas

In the disease, involvement of Medovaha Srotasa is the main factor along with the involvement of other Srotas. According to Acharya Charaka, Avyayama, Divaswapa excessive intake of Medur dravyas and Varuni, are the Nidana of Medovaha strotodushti. It indicates clear involvement of Medovaha strotas along with Rasavaha strotas. Atisweda and Daurgandhya indicate the involvement of Swedavaha strotas. Presence of Atipipasa indicates the involvement of Udakavaha strotas. In the pathogenesis of Sthaulya, increase fat deposition inside the muscle (Vasa) indicates the involvement of Mamsavaha strotas.

4. Agni and Ama

According to Vagbhata, Mandagni at Jatharagni and Dhatvagni level is considered as root cause of all disease. Due to Mandagni, formation of Ama occurs. Some disorders like Ajeerna, Alasaka, Vishuchika emerge as a result of derangement of Jatharagni, while disorders like Sthaulya results from derangement of Dhatvagni.

In Sthaulya, due to vitiation of Vata by obstruction of Meda, Tikshnagni is a prominent feature. Here, a question arises, how Ama formation can take place instead of Tikshnagni. Commentators Chakrapani and Dalhana have tried to clarify this controversy by giving explanation, that in the stage of Tikshnagni, person go for Adhyashana, Kalavyatita ahara sevana 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 Parinaman concept', (at Dhatvagni level) Vriddhi of previous Dhatu and Kshaya of further Dhatu are take place.^[5] In cases of Sthaulya, excessive consumption of Guru, Madhura, Snigdha guna dominant diet produces excessive and inferiority Medodhatu Poshaka Annarasa, this makes Medodhatvagnimandya. So as per above concept in the state

of Medodhatvagni mandyata, previous i.e., Medodhatu increase and further/Uttaradhatu i.e., Asthi, Majja, Shukra are decreased.

According to modern sciences, Obese persons having an increase in number and/or size of adipose cells suggest hypertrophy and/or hyperplasia of adipocytes either due to functional demand in particular age or sex or due to genetic, endocrine, behavioral, psychological or iatrogenic factors. After reduction in weight the adipose cells shrink in size but hyperplasia remains fixed. Adult onset obesity is characterized predominantly by adipose cell hypertrophy with minimum hyperplasia. There are three main factors in the pathogenesis of obesity.

- Excessive lipid deposition
- Diminished lipid mobilization and
- Diminished lipid utilization

Assessment of obesity

According to ayurved: Diagnostic method describes in Ayurvedic texts are subjective as well as objective type. According to Ashtavidha Pariksha, Sthaulya can be diagnosed by Akriti Pariksha, Ayurvedic Pramana Pariksha and Samhanana Pariksha can be correlated with objective criteria of diagnosis like measurement of height, weight, various girth measurements and skin-fold-thickness. Acharya Charaka has been mentioned anthropometry of body, under the caption of Dashavidha Pariksha. It may provide a relative measurement and objective criteria for patient of Sthaulya.

According to modern: Obesity can be assessed by following tools^[6]

- 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/m^2). This index provides a satisfactory measure of obesity in people who are not hypertrophied athletes. The classification of obesity:

Under weight	<18.5 kg/m ²
Normal weight	18.5-24.9 kg/m ²
Over weight	25-29.9 kg/m ²
Obesity (class I)	30- 34.9 kg/m ²
Obesity (class II)	35-39.9 kg/m ²
Morbid Obesity (class III)	>40 kg/m ²

CONCLUSION

Sthaulya is a Dushya dominant Vyadhi. Etiological factor mainly Vitiates Vata Kapha-Meda. This increases gravity of the disease and makes the Sthaulya Kritchha sadhaya. Vyana Vayu could not transport nutrient to other dhatu due to obstruction by Meda; so Medadhatu is increased and Uttardhatu decreased. Sthaulya is a predominant metabolic disorder, which is described by Charaka in Ashtanindita Purusha. Sedentary life, lack of exercise, faulty food habits, urbanization, psychological factors like Harshanitya, Manasonivrita etc. along with genetic predisposition play a major role in aetiopathogenesis of Sthaulya. Acharya Charaka has illustrated that Krishata is better than Sthaulya because when Sthula purusha affected by disease suffers more due to it as compared to Karshya. Kapha Prakriti persons are more prone to become obese (Sthula).

Obesity occurs more in female than male and specially increases after marriage, light nature of work, use of IUCD, contraceptive pills, after delivery and in menopausal period etc. In the Samprapti of Sthaulya Medodhatvagnimandya, Ama Rasa, Kapha Vata pradhana Tridosha play important role. Hence, Treatment modality should be planned considering vitiated Meda, Kapha and Vata.

REFERENCES

1. Acharya VY. Charak Samhita of Agnivesa Elaborated by Charaka and Dridhbala with the Ayurved Dipika Commentary by Chakrapanidatta. Sutrasthana Varanasi: Chaukhamba Surbharati Prakashan, 2011; 117: 21 -9.
2. Shah SN, Paul A. API Textbook of Medicine. Bombay: National Book Depot, 2008; 8: 985.
3. Kunte DA, Navre KR. Ashtanga Hridaya of Vagbhata. Sutrasthana. Varanasi: Chaukhamba Subharti Prakashan, 2009; 224: 14 – 14.
4. Trikamji Y. Sushruta Samhita with 'Nibandhasangraha' commentary by Dalhanacharya. Varanasi: Choukhamba Surbharti Prakashan, 2009; 73: 15 -32.

5. Kunte DA, Navre KR. Ashtanga Hridaya of Vagbhata. Sutrastana Varanasi: Chaukhamba Subharti Prakashan, 2009; 188: 11 – 34.
6. Shah Siddharth N, Paul A. API Textbook of Medicine. Bombay: National Book Depot, 2008; 8: 986.