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Review Article

A REVIEW ON CONCEPT OF STHAULYA AND ITS MANAGEMENT WSR OBESITY

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ABSTRACT

Obesity is one among the major diseases of modern era, increasing in prevalence. The World Health report of W.H.O. listed Obesity under 10 top selected risks to the health. *Sthaulya* (Obesity) is well known from the *Samhita* period and is considered to be one of the eight undesirable conditions (*Ashtau Nindita*). It can be caused due to *Mandagni* as *Agni* is considered to be responsible for metabolism. Thus, *Ama* formed moves within body, further are causing *Medovruddhi*, which produces excessive stoutness. According to modern science, one of the causes for obesity is sedentary lifestyle, where there is more intake of junk food and less physical activity. This also signifies in increased BMI, further leading to obesity.

Keywords: Sthaulya, Obesity, Management, Hina, Madhyam, Adhika, Nidana.

INTRODUCTION

The 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 (daily routine), Ritucharya (Seasonal regimens), 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 social, physical and mental features. Acharya Charaka listed eight defects underlying- Sthaulya Purusha, Ayuhrasa, Javopradha, Alpa-vyavayita, Daurbalya, Daurgandhya, Swedabadha, Atitrisha, 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. Treatment of obesity is difficult without the cooperation of patient. Patients need motivation for this. Still appropriate remedy is awaited, which defeat the obesity without any adverse effect on body.

Here, I tried to highlight how can body physiological entities turn in pathological state & responsible for disease (Sthaulyata) and How can bring this abnormal entities back to its normal state by applying our traditional Ayurved therapy.

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 an abnormal distribution of Meda with reduced enthusiasm towards life is called Atisthula¹. Obesity is an increase in body weight beyond the limitation of skeletal and physical requirements as the result of excessive accumulation of body fat².

Classification: Vagbhata have been mentioned three types of Sthaulya i.e. Adhika, Madhyama and Hina with management point of view³.

- 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 8 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 8undesirable 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:

Ahararasa plays a major role for increasing Medadhatu in Sthaulya. So, AcharyaSushruta has mentioned, Sthaulya and Karshya depends upon the quality and quantity of Ahararasa⁴. On the basis of Samanya Vishesh Siddhanta and Ashraya-ashrayi Sambandha the excessive consumption Kapha Vriddhikara Ahara causes the over production of Rasadhatu with further over production of Medodhatu.

Role of Viharatmaka Nidana:

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

Role of Manas Nidana:

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 Medavridhi. 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 Beejadosh: Acharya Charaka has mentioned that Beejadosh plays a major role for Medovridhi. 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 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. Dosh
2. Dushya
3. Srotasa
4. Agni and Ama

1. Dosh:

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 Dosh in pathogenesis of the disease. Excessive consumption of Ahara like Guru, Snigdha, Madhura, Sheeta, Picchila; Vihara like Avyayama, Divaswapa 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 the SthaulyaRogi belongs to Kapha Prakriti so they may have slow and lethargic physical activity with SthulaAnga 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 is also remains in higher sight because the symptoms of Sthaulya like AtiKshudha, AtiPipasa, Swedadhikya, Daurgandhya have also been mentioned in the Pitta Vriddhi Mainly the Pachaka pitta is involved in the aetiopathogenesis of the disease.

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

2. Dushya:

AcharyaSushruta has mentioned Sthaulya as a Dusya 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 Ashray-ashrayibhava 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 Gunadominant Poshaka Annarasa. This specific Dhatuposhakansha in excessive a quality andquantity increased the particular Dhatu. In disease Sthaulya excessive intake of Guru Snigdha, Madhuradi Guna dominant diet, increase accumulation of Medodhatu.

3. Srotasa:

In the disease, involvement of Medovaha Srotasa is the main factor along with the involvement of other Srotasa. According to Acharya Charaka, Avyayama, Divaswapa excessive intake of Medurdravyas and Varuni, are the Nidana of Medovahasrotodushiti. 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, Mandagni at Jatharagni and Dhatvagni level is considered as root cause of all disease.

Due to Mandagni, formation of Ama occurs. Some disorders like Ajirna, 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 arise, 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 goes for Adhyashana, Kalavyatitaahara 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 Parinama concept', (at Dhatvagni level) Vriddhi of previous Dhatu and Kshaya of further Dhatu are take place⁵. 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 Medodhatvagnimandya, previous i.e. Medodhatu increase and further/Uttaradhatu i.e. Asthi, Majja, Shukra are decreased.

According 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 Ayurveda

Diagnostic method describes in Ayurvedic text are subjective as well as objective type. According to Astavidha 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 tools⁶:

- 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:

WHO Classification

BMI	Classification
< 18.5	Underweight
18.5-24.9	Normal weight
25.0-29.9	Overweight
30.0-34.9	Class I Obesity
35.0-39.9	Class II Obesity
≥ 40.0	Class III Obesity

Chikitsa of Sthaulya:

Acharya Vagbhatta mentioned that Karshya is better than Sthaulya; because there is no perfect remedy for the Sthaulya⁷. In the Samprapti two factors are of prime importance, TikshnaJatharagni and Medodhatvagnimandya. Irrationality between two levels of Agni makes the disease KrichhaShadhya, but Panchkarma therapy can give better solution for this problem. In Ayurvedic texts different Shodhna procedure i.e. Vamana, Virechana, LekhanaBasti, Raktamokshana are mentioned for the treatment of Sthaulya.

ShamanaChikitsa:

ShamanaChikitsa can be implemented through seven different ways. Deepana, Marutsevana, Kshudha Nigraha, Pachana, Atapasevana, Trusha Nigraha, Vyayama. Langhana is advisable in Samtarpanjanya Vyadhi, in Amashyotha Vikara, in Shleshmika Vikara, in Rasaja Vikara and it is the best remedy for the Sama condition of disease. So, all seven types of Langhana can be applied for the patients of Sthaulya according to Rogi Roga Bala. i.e. Administration of Guru and Apatarpaka articles which possess additional Vata, Shleshmaghna and Medonashaka properties is considered as an ideal for Samshaman therapy.

Acharya Charaka has mentioned **Lekhaniyadashemani Dravyas** – a group of 10 drugs, these drugs principally perform the Lekhana Karma of excess and abnormal Meda, causing weight reduction as well as relief in other signs and symptoms. These drugs are given below –

1. Mustaka
2. Kustha
3. Haridra
4. Vaca
5. Ativisha
6. KatuRohini
7. Chitraka
8. Chirabilva
9. Daruharidra
10. Haimvati (Karanj)

Madhu has Guru and Ruksha properties; hence it is ideal one for management of Sthaulya. Some samshamana yoga like Guduchi, BhadraMusta, Triphala, Takrarista, Makshika, Vidangadi Lauha, Bilvadipanchmula and Shilajatu with Agnimanthasvarasa are advised to practice for prolonged period. Some drugs and preparation like Karshana Yavagu of Lekhaniya Mahakashaya Venuyava, Bibhitaka and Madhudaka are advocated as Medanashaka and Lekhaniya. In Ashtanga Samgraha, Madanaphaladi churna, Kutajadichurna,

Hingvadichurna and Vidanga dimantha etc. herbal yoga are mentioned. Krishna Lauha, Shankha and Samudraphena, Tuttha Manahshila and Shilajeeta are additional dhatu described as Lekhana and Medonashaka. Rasanjana is mentioned as the best for the treatment of Sthaulya, while Guggulu is mentioned as the best for the disorder of Vata and Meda. So, guggulu can be used for the treatment of Medavrita Vata condition. In Ashtanga Hridaya, Gomutra Haritaki, Rodhrasava, Navakaguggulu, Amrutaguggu, Vardhamana Bhallataka Rasayana etc. are the remedies added for the management of Sthaulya. Bhava Prakasha has mentioned the remedies for Medohar purpose, Chavyadi Saktu, Triphaladyachurna, Mulichurna, Erandapatra Kshara, Badaripatra Peya, Amrutadiguggula, Dashangaguggul, Trashusna diguggula, Loha Rasayan, Lauharishta etc.

Common herbs that can be used:

Triphala: It is combination of 3 healing herbs, their fruits are used.

Amalaki (*Emblica officinalis*),-

Haritaki (*Terminalia chebula*)

Bibhitaki (*Terminalia bellerica*)

Effects of Triphala- all dosha balancing, very good cleanser, purifies blood and a rejuvenating herb. It decreases excessive Meda, reduces serum cholesterol, reduces the plaque formation in the arteries, high blood pressure, provides remarkable protection in CVD. In a study conducted by the American Botanical Council, it was shown that Triphala greatly reduced blood glucose levels in diabetic rats.

Guggulu (Commiphora mukul)-Useful part is Resin, Old guggulu- scraping quality. It is strong detoxifying & cleansing & rejuvenating herb. Lower cholesterol and triglycerides and maintain or improve HDL/LDL ratio, anti-inflammatory effects.

Vidanga (Embeliaribes)- Vatakapha pacifying, agni stimulating, Vidanga allays vata, it is diuretic, a mild purgative and kills worms, it is an appetizer, digestive, blood purifier and rejuvenator.

Shilajatu-Mineral pitch Mainly Vata and Kapha balancing. It decreases excessive fat, very helpful in enhancing sexual powers. It is anti-inflammatory and antioxidant.

Some common preparations used in obesity-

- Navak Guggulu
- Triphala Guggulu
- Amrutadya Guggulu
- Chandraprabhavati
- Mustadi Kwath
- Vidangadi Churna
- Anupan- luke warm water and honey

Yoga: Asana Suryanamaskar, Pawanmuktasana, Utthanpadasana Dvichakrikasan, Padvruttasan, Naukasana, Pranayama (breathing exercises) and Meditation.

Nidana Parivarjana:

It is most important measure for Sthaulya. In Sthaulya, the factors which are responsible causes of the disease should be avoided to stop further progress of the disease. According to modern science, First aim of therapy is to reduce weight; second aim of therapy is prevention of further weight gain. The strategy for treatment of obesity includes phases as:

- Patient counseling
- Dietary management
- Exercise therapy
- Pharmacotherapy
- Weight loss surgery.

Samshodhana:

Atisthula patients with proper dosha and bala should be treated with samsodhana therapy, including Vamana, Virecana, Ruksa Niruha, Raktamoksana and sirovirecana. Being a syndromic condition (Bahudosyasa Lakshanam) samsodhana therapy is highly recommended for Sthaulya patients possessing stamina and strength. Ruksa, Usna and Tikсна Basti are also suggested by Charaka. Ruksa Udvartan is the bahyashodhan indicated for the management of sthauya. 'Snehana Karma' is always restricted for the patients of Sthaulya, however for external use Taila is recommended.

CONCLUSION

Sthaulya is a Dushya dominant Vyadhi. Etiological factor mainly Vitiata Vata Kapha Meda. This increases gravity of the disease and makes the Sthaulya Kritchhsadhaya. 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 Sthulapurusha 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 Vatapradhana Tridosha play important role. Some herbal drugs like Musta, Triphala, Guggulu possess Kapha-Medohar & Vataghna.

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