



Review Article

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AN INNOVATIVE APPROACH FOR MANAGEMENT OF OBESITY THROUGH AYURVEDA: A REVIEW

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ABSTRACT

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. Obesity is a leading but preventable cause of death worldwide. Incidences are increasing in adults and children due to faulty dietary habits including junk foods, lack of physical exercises and sedentary life style. Obesity increases the risk of many diseases such as cardiovascular diseases, type 2 diabetes, depression and hypertension etc. The main treatment for obesity consists of dieting and physical exercise. Dieting includes right choice of food substances which fulfil the energy requirements without increasing the body fat. In *Ayurveda*, this condition is named as *Atisthula* or *Medo-roga*. An extensive description pertaining to *Medo-roga* and its treatment is available in classical texts. In *Ayurveda*, treatment for obesity is based on *guru* (diet fulfilling energy requirements) and *aptarpana* (diet reducing body fat) *chikitsa siddhanta* (treatment modality).

Keywords: Obesity, *Medo-roga*, Role of *Ayurveda*

INTRODUCTION

Obesity is an abnormal accumulation of fat usually 20% or more over an individual's ideal body weight. People are generally considered obese when their body mass index (BMI) is 30kg/m², with the range 25-30kg/m² defined as overweight¹. In *Ayurveda*, obesity (*Medo-roga*) is described as a condition in which buttocks; abdomen and breast become flabby due to fat accumulation and move while walking².

The incidences of obesity are increasing very rapidly. In 2015, 600 million adults and around 100 million children were obese³. Obesity is most commonly caused by a combination of excessive food energy intake and a lack of physical activity. Some genetical factors, medical reasons or psychiatric illness also causes obesity. In *Ayurveda*, high calorie food, frequent eating, avoidance of physical work and sleeping in day time are described as causative factors of obesity (*Medo-roga*).

Diet and life style play important role in management of obesity. Indulgence in physical work and use of low calorie food are mentioned in the treatment of *Medo-roga*. Various herbs such as *Triphala* (combination of *Terminalia chebula*, *Terminalia bellirica* and *Emblica officinalis* in equal parts.), *Sunthi* (*Zingiber officinale*), *Amalaki* (*Emblica officinalis*), *Guduchi* (*Tinospora cordifolia*), *Guggulu* (*Commiphora mukul*), *Madhu* (Honey) and *Munga* (a type of cereal) etc. should be used by obese person.

Data Sources

This article is based on a review of *Ayurvedic* and modern texts along with research related to obesity and its management. Different *Ayurvedic* classical books as *Charaka Samhita*, *Sushruta Samhita*, *Astanga Samgraha*, *Astanga Hridaya* etc. were referred to fulfil this part.

Prevalence of Obesity

In 2014, 58% of women and 65% of men were overweight or obese⁴. Obesity prevalence has increased from 15% in 1993 to 26% in 2014. Obesity in India has reached epidemic proportions in the 21st century, with morbid obesity affecting 5% of the country population⁵. Obesity being a major risk factor for cardiovascular disease has become a major health hazard and its prevalence is rising in India due to unhealthy, processed food and sedentary life.

Obesity in Ayurveda

Obesity has been named as *Atisthula* and *Medo-roga* in *Ayurveda*. It is described under the *Santarpanotha vikara* (diseases occurring due to high calorie diet and lack of physical exercises)⁶. *Acharya Charaka* has described the causes of obesity and these are⁷:

- Overeating (*Atisampurna*)
- Indulgence in high calorie diet (*Guru, snigdha, madhura*)
- Not performing physical and mental exercises (*Avyayama, achinta*)
- Due to inheritance (*Beeja-dosha*)

All these causes are still relevant and considered as main cause of obesity. In present time, a combination of excessive food intake and a lack of physical activity are considered the main cause of obesity. A limited number of cases are primarily due to genetics, medical reasons or psychiatric illness.

Sthaulya (obesity) is considered as one of the eight types of undesirable conditions as described by *Acharya Charaka*⁸. He has also mentioned 8 reasons explaining why obese person should be considered as unhealthy.

- An obese person is prone to many diseases so life expectancy is decreased. (*Ayurhrasa*)
- He is not enthusiastic for any kind of work (*Javoparodha*).

- Sexual life is also affected (*Krichravayavayata*).
- In-spite of being overweight, he feels weakness (*Daurbalya*).
- He may have bad body odour (*Daurgandhya*).
- He sweats more and can't tolerate hunger and thirst (*Swedabadha, Kshutpipasadhikya*).

Obesity as a major health problem

Obesity is a major public health problem due to its association with serious chronic diseases such as type 2 diabetes, hypertension and hyperlipidaemia (high levels of fats in the blood that can lead to narrowing of blockages of blood vessels). Complications fall into two broad categories: those due to increased fat mass (such as osteoarthritis and obstructive sleep apnea etc.) and those due to increased number of fat cells (diabetes, cancer, cardiovascular disease, non-alcoholic fatty liver disease).

A 2016 review supported excess food as the primary factor. Total food energy consumption has been found to be related to obesity. Most of this extra food energy comes from sweetened drinks such as soft drinks, fruit drinks, iced tea, energy drinks, potato chips and fast foods. A sedentary life style plays a significant role in obesity. This is primarily due to increasing use of mechanized transportation and a greater prevalence of labour saving technology in the home. In both children and adults, there is an association between television viewing time and risk of obesity. Obesity has become a public health and policy problem because of its prevalence, costs and health effects.

Ayurveda emphasised on healthy body weight. One should neither be obese nor malnourished. But when comes in comparison between obese and malnourished, *Ayurveda* considers that being obese is more harmful as it increases the risk of many physical and mental conditions⁹.

Management of obesity

Modern treatment of obesity includes:

1. Dietary plan
2. Physical exercises
3. Use of anti-obesity drugs
4. Bariatric surgery

Dietary and lifestyle changes are considered as main treatment for obesity. Diet programs may produce weight loss over the short term and long term. Low carbohydrates and low-fat diet is beneficial. Some drugs are also used for treatment of obesity. The most effective treatment for obesity is bariatric surgery. But these surgeries are costly and risky too.

In *Ayurveda*, treatment of obesity is described very systemically. Various single herbs, compound formulations, exercises and life style modification have been mentioned. In *Ayurveda* management of any disorder is divided into 3 parts:

1. *Nidana Parivarjana* (Avoidance of causative factors)
2. *Shodhana* (Purification therapy for removal of body toxins)
3. *Shaman* (Medication therapy)

Nidana Parivarjana

It is the 1st line of treatment for any disease. *Nidana* (causative factors) must be avoided for best management of the disease. In case of obesity high calorie diet, fast foods, sweetened drinks should be avoided.

Shodhana

Ruksha, Ushna and *Tikshana Basti* (administration of medication through anal route) are also suggested by *Acharya Charaka*. *Ruksha Udvartan* (massage with herbs' powder) is indicated for the management of *Sthaulya*¹⁰.

An effort has been done by Chaturvedi sonal et al. to study the role of *Lekhana basti* and *Virechana karma* in the management of obesity. According to this, *Basti* provides better results than *Virechana* in the management of obesity¹¹.

Shamana

It includes use of medication which reduces *Vayu, Kapha* and *Meda*. Administration of *Guru* and *Apatarpana* substances which possess additional *vata slesma* and *meda nasaka* properties is considered as an ideal for *Sanshamana* therapy. According to *Acharya Charaka*, an obese person should be advised to do more exercise and physical and mental work.

A study has been done by Patil Y.R. et al. on a classical preparation "*Karshniya Yavagu*" to evaluate its efficacy in the management of obesity. Intergroup comparison of *Karshniya Yavagu* and starch capsule 500mg with low calorie diet was done. *Karshniya Yavagu* showed better results as compared to starch capsule 500mg with low calorie diet¹².

Single Drugs which can be used for obesity are:

- *Vayavidanga (Embelia ribes)*
- *Sunthi (Zingiber officinale)*
- *Kshara (Alkalis)*
- *Madhu (Honey)*
- *Guggulu (Commiphora mukul)*
- *Mustaka (Cyperus rotundus)*
- *Katuki (Picrorrhiza kurroa)*
- *Chitraka (Plumbago zeylanica)*
- *Haridra (Curcuma longa)*

An experimental study was performed on Rats show; *Cyperus rotundus* stopped weight gain and in vitro, stimulated lipolysis in 3T3F442 adipocytes¹³.

In a study of hyperlipaemic mice on a high-fat diet, daily doses of water extract of *Picrorrhiza kurroa* significantly reduced total cholesterol, triglycerides and LDL levels after 12 weeks¹⁴.

A study has been conducted by Gupta Twinkle et al. on *Panchakola Phant* containing *Sunthi, Pippali, Pippalimula, Chavya, and Chitraka* in the management of *mandagnijanya Sthaulya* with special reference to obesity. It showed good efficacy in relieving both subjective and objective parameters¹⁵.

Compound drugs are

- *Triphaladi kwatha*¹⁶
- *Mustadi kwatha*¹⁶
- *Kusthadi churna*¹⁷
- *Trayushnadi mantha*¹⁷
- *Triphala churna*¹⁸
- *Shuddha guggulu*¹⁸

Others compound drugs are *Medohara guggulu, Navaka guggulu, Trigunadi guggulu, Arogyavardhini vati, Chandraprabha vati, Punarnavadi kwatha* and *Shilajetvadi vati*.

In *Ashtanga Samgraha Krishna Lauha, Shankha, Samudraphena, Tuttha, Manahshila* and *Shilajeet* 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*.

Pathya for obesity (what to do): *Munga, Kultha, Arhar, Parvala, Amalaki, Yava, Kodrava, Prashatika, Priyangu, Yavaka* etc. should be used in daily routine. *Madhu panaka* should be used after meal. Regular exercise should be done¹⁹.

Apathya for obesity (what to avoid): Any food substance or activity which increases *kapha* and *meda* should be avoided.

DISCUSSION

Incidence of obesity is increasing day by day due to increase in energy dense foods and decrease in physical work. Being overweight and obese can have a serious impact on physical and mental health. Obesity can reduce life expectancy by upto 9 years. Obese children and young people face the same health risks as adults. As high calorie diet and physical inactivity are main cause of obesity, there should be a balance in calorie consumed and calorie used.

Carbohydrate rich foods like potato and polished rice and oily and fried foods should be avoided. Whole wheat flour should be used.

CONCLUSION

Obesity is public health and policy problem because of its prevalence and health effects. Efforts should be done to change the factors that cause excess food energy consumption and inhibit physical activity. Ayurvedic principles should be followed to attain a healthy weight which says that a person doing regular exercises, consuming food as per caloric requirement, taking high fibrous diet always remains healthy.

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