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Tabassum. K
National Institute of Unani
Medicine, Bangalore, KA, India

Mohammad Nasar. K
Lecturer, Dr. Abdul Haq Unani
Medicinal College, A.P, India

Scope of Unani Herbal Medicine in the Management of Obesity - A Review

Tabassum. K and Mohammad Nasar. K

ABSTRACT

Obesity is a term used to describe body weight that is much greater than what is considered healthy. It has become a serious public health problem. It affects 32.2% of the global population. The worldwide prevalence of obesity is 1.6 billion and is already reached epidemic proportions mostly in high income groups. Strategies involve general lifestyle modification includes healthy diet, maintain optimal weight, physical activity etc. Non-pharmacological therapy consists of diet and exercise, but most of the cases this form of therapy may not be helpful to reduce weight satisfactorily. The available synthetic Pharmacological therapies having its own side effects and limitations. Unani herbal Medicine plays an important role in the management of obesity. Number of herbs is documented in Unani classics to reduce weight and studies have also been carried out for its anti-obesity activity. This paper gives information on herbs and its mechanism of action for weight reduction.

Keywords: Anti-obesity herbs, Life style disorder, Morbidity and Weight

1. Introduction

Obesity is defined as a disease process characterized by excessive body fat accumulation with multiple organ-specific consequences and is a multifactorial disorder. Obesity and overweight occurs due to imbalance between calories consumed and calories utilized. These are the most common nutritional disorders in developed countries, affecting the majority of adults in the country and are associated with significant morbidity and mortality. Individuals whose BMI lies between 25 and 30 kg/m² are considered overweight, if it exceeds 30 kg/m² are defined as obese and more than 40 is considered as morbid obesity^[1]. Obesity is the fifth leading risk for global deaths. At least, 2.8 million adults die each year as a result of being overweight or obese. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity. WHO global estimates for the year 2009, reported 1.5 billion people were overweight, of these, over 200 million male and nearly 300 million females were obese. Overall, more than one in ten of the world's adult population was obese^[2, 3]. In 2010, around 43 million children under five were overweight. Currently population of India is 1.22 billion among them 199 million are obese; it means India is gaining weight. Traditionally India is known for malnutrition but now overindulge. Overweight and obesity are now on the rise in low and middle income countries, particularly in urban settings. Nearly 35 million overweight children are living in developing countries and 8 million in developed countries^[4]. Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. But in addition to increased future risks, obese children experience breathing difficulties, increased risk of fractures, hypertension, cardiovascular diseases and psychological effects^[5].

According to Unani concept obesity is also known as *Samane Mufirat* (obesity). It is a *Balghami* (Phlegmatic) disease and hence *Khilte Balgham* predominates in the body of person and is a predisposing factor in causation of obesity. In this condition loss of movements of *Aaza* (organs) is due to excessive accumulated *Balgham* (fat) and cold temperament, hence the person becomes lazy and dull. This situation is just like *Qaidul Badan* (arrest of body). *Balgham* after mixing with blood produces lubrication in its *Qiwam* (viscosity)^[6] Increase in the *Balgham* causes increase in viscosity of the blood and also constrict blood vessels. Deposition of *Balgham* (Atherosclerosis) obstructs *Nufuz of Rooh* (passage of oxygen) in the organs which finally cause death of the obese persons^[7, 9, 15-17].

When *Shahem* deposits in a particular organ it is called local or central obesity for example

Correspondence:
Mohammad Nasar. K
Lecturer, Dr. Abdul Haq Unani
Medicinal College, A.P, India

protrusion of abdomen due to the deposition of fat. When there is generalized deposition of fat in the body, is called general or peripheral obesity. The causes of *Samane Mufirat* are *Virasati* and *Khilqi Samane Mufirat* (hereditary and congenitally), *Maroob Ghiza* (fatty diet like meat, sweet dishes), *Maroob Roghinyat* (fatty oils), *Baroodat Mizaj* (coldness of temperament), *Rahat wa warzish ki kami* (excessive rest and lack of exercise), *Kasrate Ghiza* (excessive eating), *Farhat* (excess of joy), Soft cloths and soft bedding for sleeping, Intake of excessive alcohol especially after meal^[8-11]. All these are responsible for excess production of *Balgham* as well as disturb metabolism. Different physicians had different opinions related to obesity, includes description of obesity including its classification, etiology, pathophysiology, risk factors, different mechanisms, complications, prevention, diet, management and scientific methods to describe morbid obesity in their classical texts^[10, 12, 13]. In spite of tremendous development in the medical science several diseases are still challenging to human being and efforts are continue to conquer them. Obesity is one of them. Certain level of weight gain is a good sign of health. If it exceeds normal limit then it becomes dangerous.

2. Management of Obesity

In spite of all the therapies still treatment of obesity is very difficult. Despite of beneficial effect of the drug, is often associated with side effects and there is rebound weight gain after cessation of the drug. When these therapies are fail to treat then people seek complimentary or safe and effective alternative medicine, which includes Unani system of Medicine. Unani Herbal Medicines plays an important role in the management of Obesity. Historically, herbal medicines have played a significant role in the management of both minor and major medical illnesses. Herbal medicines make up an important component of the trend toward alternative medicine. Usage of herbs for the management of obesity in the recent times is attracting attention. Our literature survey also indicated that these herbal products fall under an acceptable level of evidence or with no scientific background at all, or they have a scientific rational but not to an acceptance level. Attempts were made in the review to define the features of possible herbal weight loss product by improvement of bio markers like blood pressure and serum lipids without any side effects.

3. Principles of Treatment

Advice for Balance food, Regular exercise and Physical activity. According to *Zakkaria Razi* and *Ibne Sina*, the treatment of *Samane Mufirat* is based on the following principles:

1. Correction of the Sue Mizaj Barid. Since the disease is cold in temperament, so herbal medicines having opposite temperament i.e. Hot and dry should be given. (Ilaj Bil Zid)
2. Elimination of the existing causes.
3. If there is accumulation of Madda or Khilt Balgham in the body use of Munafis Balgham (Expectorant), Mushil Blagham (Purgatives), Mudir (Diuretics), Muarrique

Advia (diaphoretics) and Mujaffif (Desiccant) will be beneficial.

4. If there is excessive amount of Khilte Dam in the body then the use of Fasad (venesection) is beneficial, otherwise it is better to use purgative of Khilte Balgham.
5. In order to reduce Samane Mufirat, bulky foods with least nutritional values should be served so that mesenteric vessels will get least time to absorb the nutriment completely. Due to bulky and less nutritious foods, it occupies the space of stomach and obese patient feels fullness in the stomach^[14, 15].

4. Categories of treatment^[10]

1. Taqleel Ghiza (Decrease in food intake)
2. Riyazat Kaseera (Too much exercise)
3. Ishaal wa Idraar (Diarrhoea and Diuretic), Fasad (venesection) and Istifrag (evacuation)

According to famous Unani physician Razi Mizaj (Temperament) of the obese persons becomes Barid, so, in such condition, the diets, drugs and exercises which produce Haar Yabis Mizaj should be prescribed. Therefore, Mulattif Aghzia (diet) and Advia (drugs), Riyazat Kaseera (hard exercises) are recommended for weight loss. Therapies includes Ilaj Bil Ghiza (Dietotherapy), Ilaj Bil Tadabeer (Regimental Therapy) and Ilaj Bil Dawa (Drug therapy)

5. Ilaj Bil Ghiza (Dieto-Therapy)^[10]

- * Avoid oily food
- * Avoid those food which increase the blood and Phlegm like kaddu, khera, kakadi
- * Intake of food is decrease in terms of Quality not in quantity. That makes the food should be less energetic, but should give feeling of fullness of stomach.

6. Ilaj Bil Tadbeer (Regimental Therapy)^[16]

It also plays an important role in weight loss management, which includes Kasrat Riyazat (excess of exercise), Dalak Khishan (rough massage), Taareeq (perspiration or Diaphoretic), Fasad (venesection), Hammame Yabis (Dry bath) and Massage with Muhallil Roghaniyat

7. Riyazat (Exercise)

This is one of the most important tools for reducing the obesity by expenditure of extra energy. However, exercise should be on regular basis and it should be introduced gradually and under medical supervision especially in the advanced obesity, otherwise, negative effects may occur. Exercise should be active and followed by massage of Muhallil Roghaniyat. Baths should be taken regularly before the meals^[10].

8. Ilaj Bil Dawa (Drug Therapy) Single drugs

8.1 Luc-Lak-e-Maghsool (Coccus lacca/Tachardia lacca)

This is an effective Unani medicine for obese people. It is hot and dry in temperament. It is having the properties of Mujaffif (Desiccant) and Munafis Balgham (Expectorant).



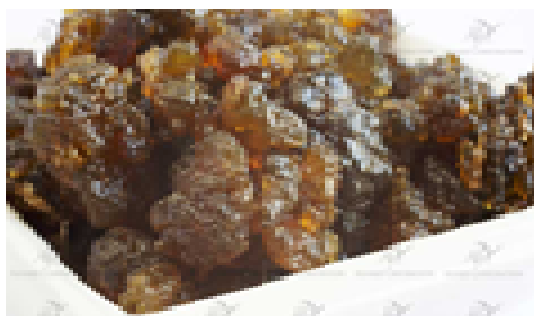
It absorbs the excess body fluid and thus reduces weight. It is a main constitute of Safoof-e-Mohazzil. One gram of Luke-e-Maghsool may be taken with water in the morning for getting positive impacts for obesity ^[17].

8.2 Lemon Juice

It is cold in temperament. It is digestive and having the property of Jali (Detergent). Lemon juice is quite effective for obesity patients. 5-10 ml of lemon juice is mixed with one glass of water and should be taken on empty stomach in the morning. The mix is very useful for melting of adipose tissue from the body as well as weight loss. However, it is recommended to take the above mix once a day, otherwise, the person may experience loose motion or some digestive problems ^[18].

8.3 Muqil (Commiphora Mukul)

Muqil having the temperament of hot and dry. The properties of Muqil include Munafis Balgham (Expectorant) and Kasir Riyah (Carminative). Studies reported that Muqil is a thyroid tonic that promotes the gland's enzymatic activity and improves its ability to absorb iodine, the essential trace mineral for thyroid hormone production. Since the thyroid controls metabolism, an under-active thyroid can be a major contributor to obesity. Muqil can stimulate weight loss at a healthy pace by perking up a sluggish thyroid and helping the body to burn calories more efficiently; thus eliminating the need for drastic caloric reduction. This herb contains Guggilosterone (GS) which inhibit adipogenesis and causes apoptosis of adipocytes. Thus control obesity ^[19]. This natural herb has also clinically also demonstrated a cholesterol-lowering ability rivaling any natural substance yet found. According to the Indian Journal of Medical Research, Muqil has been found to reduce total blood cholesterol in the range of 22 to 27 percent, irrespective of dietary modifications. Since heart attack risk drops by two percent for every one percent drop in total cholesterol, Muqil can cut the chance of heart attack in half. It also brings down levels of the unwanted LDL



and VLDL components of cholesterol which clog the arteries, while at the same time raising the anti-clogging HDL and Muqil reduces triglycerides - fatty substances that contribute to atherosclerosis and heart attack risk ^[19].

8.4 Kharkhask-Ghokru (Tribulus Terrestris)

Kharkhask is also known as Ghokru having hot and dry temperament and its main function is Mudir (Diuretic). It is serves as a liver tonic by elevating the hormones. The subsequent stimulating effect on the liver improves protein synthesis and fosters positive nitrogen balance which promotes muscle development, stamina, and higher metabolic rate necessary for burning excess calories and fat ^[20].



8.5 Zardhob-Haldi (Turmeric-Curcuma Longa :)

It is hot and dry in temperament. It has Munafis Balgham (Expectorant) and Mujaffif (Dessiccant) action. It is one of the best natural antiseptics. It is a good digestive tonic and blood and liver purifier. It helps in the clearing and improved functioning of the entire digestion system particularly the intestines. Turmeric also helps to reduce cholesterol levels and regulate blood sugar level. Its antioxidant property prevents from free radical damage and decrease oxidative stress and thus prevents cardiovascular complications associated with obesity ^[21].



8.6 Filfil siya (Pepper-Embelia Ribes)

It is hot and dry in temperament and is digestive and carminative. This invigorating herb improves the activity of digestive enzymes that ensure proper processing of food and metabolic waste products. It stimulates fat metabolism while serving as a mild laxative. Together these actions help regulate and reduce weight without causing fatigue ^[18].



8.7 Zanjabeel (Ginger-Zinjiber officinalis linn)

Is hot and dry in temperament. It is commonly used as a spice and found all over India. Preclinical studies on ginger reported that it contain two major constituents gingerol and shaghol which suppress absorption of dietary fat from the intestines and help in dissolution of excess fat deposited in the body. It increases BMR and thus controls obesity. It also has anti-hyperlipidemic activity and reduces abnormal cholesterol level in the blood [22]. Zeera Siya (*Cuminum sativum linn*), Tukhm Sadab (*Ruta graveolence linn*), Jutiyaana (*Gentiana lutea linn*), Lahsan (*Allium sativum linn*), Zarawand (*Aristolochia*), Murmakai (*Commiphora myrrha*) these herbs having the temperament of Hot and Dry and Munafis Balgham (Expectorant), Mujaffif (Desiccant) and Mohazzil (Weight reduction) property makes the excess of body fluid into dry in obese person and reduce weight, Mudir (Diuretics), Mushil Balgham (Purgatives), Moarikh (Diaphoretic) Excretes abnormal Balgham in the form of urine, stool and sweat) and decrease the pressure in the vessels and restore normal function of the vessels (Vasoconstriction and Vasodilatation), thus Ruh (Oxygen) pass to the organs, Kasir riyah (Carminative) decrease flatulence [17, 18].



9. Murakkabat (Compound formulations) [23, 24]

9.1. Jawarish Kamooni Kabir

This unani medicine may be taken 4-6 gram twice a day, is found useful for obese patients.

9.2. Majoon -e-Muhazzil

0 gram of it may be taken at the bed time. This is good in minimizing of fats from the body.

9.3. Majoon-e- Muqil

It is recommended to have 10 gram of this useful Unani product at the bed time. This is beneficial for obesity patient.

9.4. Safoof e muhazzil

5gr along with arq zeera 20 ml two times per day

9.5.

Shahed khali and jamun ka sirka equal quantity early morning empty stomach

9.6.

Itrifal Sagheer bed time

9.7. Jawarish Falafali twice daily 9.8. Anqarudiya twice daily

10. Conclusions

There are several plants described in Unani system for weight management. But so far, no systematic and well-designed screening is attempted to come up with an effective herbal weight loss product. A better understanding in the existing evidence based science on herbs will further guide a qualitative research in obesity management that will attract the end users by the effective benefits. The combination of multiple herbal preparations having different mechanism of action may be more beneficial in the management of obesity and its complications. Thus better randomized, double blinded, placebo-controlled clinical trials using herbal products will be of potential benefits.

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