



Review Article

Saman-E-Mufrit [Obesity]: Prevention and Control through Unani System of Medicine

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Abnormal or excessive fat accumulation that may impair health is known as obesity. It is alarmingly increasing across the world. Obesity is a term used to describe body weight that is much higher than what is thought to be healthy for his/her height. It is a complex disorder which present with number of risk factors in almost all age groups. Saman-e- Mufrit is a state of abnormal growth of adipose tissue, due to enlargement of fat cell size or an increase in fat cell number or in both. It is a dangerous public health problem of present century and is one of the leading and preventable causes of mortality which is affecting the whole world. According to W.H.O. 39% of adults aged 18 years and above were overweight or obese in 2016, and 13% were obese. 38 million children under the age of 5 years were overweight or obese in 2019. Obesity is emerging as an important health problem in India The national family health survey [N.F.H.S.] shows that 12.1% men and 14.8% women in India are either overweight or obese. Obesity is the world's one of the oldest metabolic disorder. The WHO now considers obesity to be a Global epidemic and a public health problem. Sedentary habits with little activity are the main reason behind increased incidence of Obesity. Obesity can lead to heart problems, diabetes and other serious health problems, which can cost millions to treat, and which can reduce life expectancy. Modern drugs for the treatment of obesity include appetite suppressants and lipase inhibitor which has its own side effects. Unani system of medicine advocates healthy life style through Ilaj bil Tadbeer, Ilaj bil-Ghiza, Ilaj bil-Dawa, to prevent all kind of diseases. Thus, in this paper an attempt has been made to highlight the strength of Unani medicine in the management of obesity.

1. Introduction

Overweight and Obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. It is a condition of abnormal growth of adipose tissue due to enlargement of fat cell size or an increase in fat cell numbers or both. Obesity is expressed in terms of BMI. A person is categorised as obese, if his BMI is $>30\text{kg/m}^2$. The number of obese adults has gone up in India from 24.1 million in 2012 to 32.8 million in 2016. It is a lifestyle disorder and widespread in both developed and developing countries. The important predisposing factors of obesity are unhealthy diet, lack of physical activity, and sedentary nature of work. People taking extra high energy foods, saturated fats, trans- fats and free sugars in their diets, are more vulnerable to obesity. Obesity is regarded as a primary risk factor for non-communicable diseases like diabetes; cardiovascular complications mainly heart diseases and disabilities like osteoarthritis and some cancers (endometrial, breast, and colon). It also poses serious public health implications and has been associated with mortality and morbidity[1].

2. Concept of Obesity in Unani System of Medicine

It is one of the oldest disease described by eminent Unani physicians. Obesity comes from a Latin word 'obedere', to

devour and in English means very fat. In Unani medicine obesity is termed as Saman-e-Mufrit means "Motapa" (Obese) excessive fat and farbahi (Persian word)[2]. Buqrat (Hippocrates) (460 BC) was the first physician who first mentioned the obesity and its possible complications including cardiovascular problems, coma and sudden death in his famous book 'Fusool-e-Buqratia'[3]. In Unani medicine, Siman-e-Mufrit implies that excessive fat deposition and hence causing domination of Burudat (coldness) in the body. 'Roofus' further highlighted the unwanted results and severe diseases related to obesity such as epilepsy, syncope, hemiplegia, breathlessness and high grade fever[4], while Jalinoos (Galen) (131-210 AD) has described very scientifically principles of treatment for morbid obesity[5]. According to Jalinoos the term given to Obesity is 'zakhamat-e-jism' with reference to him Rhazi translated his quote as "A person obese from childhood died earlier than a normal person" [6], it is also mention that the reaching of body towards the end stage of obesity is very fatal. It is also mentioned by name of 'Imtala-e-mufrit'.

In Sharah (explanation) of "Fusool-e- Buqratia" Jalinoos mentioned his quote "If this obesity will not decrease than the risk of rupturing of vessels persist and due to this sudden

death can occur.”[7] Rabban Tabri (700-780 AD) described etiology and patho-physiology of Saman-e-Mufrit in his famous book “Firdous-ul- Hikmat”. He stressed that excessive eating and sedentary lifestyles are the most important factors contributing to the development of obesity[8]. Zakariya Razi (865-925AD) also described risk factors, etiology and specific treatments of obesity, including Ilaj bil Ghiza (dietotherapy), Ilaj bil Dawa (pharmacotherapy), and Ilaj Bil Tadbeer (regimenal therapy) based on his own experience and practice[9]. Although, Ibn Sina (980-1037 AD) put much stress on Taqleel Ghiza (decreased food intake) in obese. He described Advia Mulattifa with their pharmacological actions and mechanisms in greater details. Infact, he described mechanism of non-absorption of food from intestine in the same manner, as the modern drugs, used in the treatment of obesity[10]. Ibn Nafis (1207–1288 AD) highlighted the alliance between morbid obesity and cardiovascular, cerebrovascular and respiratory ailments. Ismail Jurjani (12th cent. AD) described the complications of obesity and their treatment[11]. He focused on the diet as well as drug therapy for the treatment of obesity. In 19th century, Azam Khan (1813-1902 AD) mentioned management of ‘Saman-e- Mufrit’ in ‘Rumooz-e-Azam’[12].

The most common ways to assess body fat distribution:

1. Body mass index (BMI)
2. Waist circumference (waist measurement in inches).
3. Abdominal circumference
4. Hip waist ratio

2.1 Body mass index

A good way to decide if your weight is healthy for your height is to figure out your body mass index (BMI). You can use your BMI to estimate how much body fat you have.

2.2 BMI category

Below 18.5	Underweight
18.5 - 24.9	Healthy
25.0 - 29.9	Overweight
30.0 - 39.9	Obese
Over 40	Extreme or high risk obesity

2.3 Waist circumference (waist measurement in inches)

Your waist measurement is another way to estimate how much body fat you have. Extra weight around your middle or stomach area increases your risk for type 2 diabetes, heart disease and stroke. People with "apple-shaped" bodies (meaning their waist is bigger than their hips) also have an increased risk for the Obesity. Skin fold measurements may be taken to check your body fat percentage. At present time, Unani experts have tried to appropriately understand this disease in view of modern patho-physiology, and related important complications resulted from obesity.

2.4 Pathogenesis

According to Unani System of Medicine, blood is the mixture of four Akhlat (humours),[13] Dam (blood),

Balgham (phlegm), Safra (yellow bile), and Sauda (black bile)[14]. They originate from food after going through digestive processes in the liver. The equilibrium of these humours in their appropriate proportion maintains health state of whole body and vice versa[15]. Akhlat are mainly produced in stomach, liver, vessels and abdominal organs as a digestive process of ingested foods. Regarding pathogenesis of Saman-e- Mufrit, two important theories have been present in this condition. Deposition of fat leads to suppression of Hararat Ghariziyya (innate heat of the body) due to Burudat-e-Mizaj (cold temperament). As a result, Hararat Ghariziyya is not equally distributed in the body. Tangi-e-Urooq (narrowing of blood vessels) is another factor, which hinders the propagation of Ruh (spirit) in the vital organs of the body. In the advanced stage of the disease, these two factors predispose to very high risk for various lifestyle disorders[10,11,16].

2.5 Risk factors

The most common risk factors for Saman-e-Mufrit are:

1. Excessive use of Alcohol[4,9,15]
2. Genetic predisposition[9]
3. Oily & fatty diets[8,9,17]
4. Excessive and highly nutritious diet[17]
5. Sedentary lifestyle[8,15,17]
6. Martoob Ghiza (fatty diet like meat)
7. Excessive Sweet dishes
8. Martoob Roghanyat (fatty oils)
9. Excessive rest and sleeping

2.6 Complications of Obesity

There are many complications of Saman-e-Mufrit, which are as follow:

1. Breathlessness due to Imtila of urooq wa Tajawif (congestion of blood vessels and cavities[18].
2. Ghashi (Syncope) and Sakta due to Imtila[10,18].
3. Rupture of any large vessel which has Raqiq Jirm (thin vasculature).
4. Khafqaan (palpitation), Tap (Fever), Qai (vomiting)
5. Aqr (sterility): The obese men carry less amount of blood, incriminated as a potential factor for deficient production of semen. Usually Obese women either do not conceive easily, if conceive, generally abort it.
6. Falij (paralysis)[12,18]
7. Jarb (sprue) wa Is’haal due to increased Rutubat (wetness)[11,19].
8. Loss of Libido[10]
9. Fatty liver disease[16]
10. Sudden Death[10,16]

2.7 Prevention and Management

The management can be categorized into three parts:

1. Ilaj bil Tadbeer (Regimenal therapy)
2. Ilaj- bil- Ghiza (Dieto Therapy)
3. Ilaj bil Dawa (pharmacotherapy)

2.8 Ilaj-bil-Tadbeer (Regimenal therapy)

1. Hammam-e-Yabis before meal

2. Tareeq (increased sweating)
3. Regimen for kasrat-e-is'hal (excess purgation)
4. Use of Mus'hil (purgative) and Mudir (diuretic) for producing Yaboosat (dryness).
5. Increased Tahleel (dissolution) of body fat
6. Hard work and sleeping on hard bed
7. Vigorous exercise like running
8. Vigorous massage of the body with Haar and Muhallil Roghaniyat such as Roghan Shibbat, Roghan Qust, Roghan Soya, Raghan Yasmin and Roghan Nardin.

Hijamah (cupping) is useful in reduction of fat[4,9,10,16].

2.9 Ilaj- bil- Ghiza (Dieto Therapy)

Qaleel-ut-Taghzia and Kaseerul Kaimoos diets (less nutritive but high in fibers) should be given, less intake of diet is commensurate with Quwwat (power) which should not be affected; strict avoidance of excessive sweets, fried meals, curry, and fatty edibles, use of hot water, as well as judicious use of vinegar and other foods processed in vinegar. Faqa (fasting), diets with Har Yabis Mizaj (hot and dry temperament) should be advocated. Hot spices should be added in Ghiza (food) due to Mulattif property e.g. Pyaz, Lehsun, Hasha, Zeera, Filfil Daraz, use of vegetables, small quantity of meal should be taken one time in a day.

2.10 Ilaj-bil-Dawa (pharmacotherapy)

Advia Mufrida (Single Unani Drugs)

Commonly used drugs are Lehsun (*Allium sativum*), Luk Maghsul (*Coccus lacca*), Nankhwah (*Ptychotis ajowan*), Soya (*Anethum sowa*), Zeera (*Carum carvi*), Anisoon (*Pimpinella anisum*), Fitrasaliyoon (*Petroselinum crispum*), Badiyan (*Foeniculum vulgare*), Tukhm Karafs (*Apium graveolens*), Marzanjosh (*Oliganum vulgare*), Tukhme Suddab (*Ruta graveolens*), Kalonji (*Nigella sativa*), Khardal (*Brasica nigra*), Filfil Siyah (*Piper nigrum*), Haleela Siyassh (*Terminalia chebula*), Haloon (*Lepidium sativum*), Jawakhar (*Potassium carbonate*), Juntiana (*Jentiana lutea*), Unsul (*Allium cepa*), Na'na (*Mentha arvensis*), Sheetraj Hindi (*Plumbago zeylanicum*), Zarawand Taweel (*Aristolochia longa*), Sandarus (*Trachylobium hornemannianum*), Sirka (Vinegar) [4,9,10,11].

Advia Murakkabah (Compound Unani Formulations)

Compound drugs include Arq Zeera, Arq Badiyan, Iyaraj Faiqra, Jawarish Kamoni, Jawarish Falafili, Majoon Baladuri, Majoon Kamooni, Anqarooya, Dawa-ul-Luk, Itrifal Saghir, Dawa-ulKurkum, Safoof Mohazzil, Amroosiya, Asnasiya, Habb-Sandarus and other Lateef drugs are useful in the treatment of obesity. Besides these measures, Mulattif, Mudirr-eBaul and Haar Yabis drugs are useful in its management[4,9,10,19].

3. Conclusion

There are number of drugs in Unani System of Medicine which have potential effects in the management of Obesity. Drugs for obesity in Unani system of medicine may prove boon in the alternative source of treatment which is further strengthened by various clinical and experimental trials conducted in the recent years. In future, more studies will be

needed to see the effects of Unani drugs on obesity. Thus, Unani medicines may play a major role not only in prevention and control of the Obesity but also in decreasing the economic burden incurred on the society for the management of lifestyle disorders.

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