EDITORIAL

Obesity - Just Adiposity or More

Muhammad Masroor

How to cite this article: Masroor M. Obesity-just adiposiy or more. Dow Uni Health Sci 2016; 10(3): 75-76.

Obesity is emerging as a serious global health issue of 21st Century. There has been a steady rise in prevalence of obesity since 1980. It has crossed western borders and entered into developing countries. Today, among the top ten fattest countries, most belong to developing world. The prevalence of obesity & overweight in these countries is up to the extent of 70%[1]. WHO recommended BMI as a measure of overweight and obesity in 1997. Two other parameters were added to define obesity further. Waist Hip Ratio (WHR) and Waist Circumference (WC) has best correlation with the amount of visceral fat[2]. Persons having a BMI over 25 are overweight and those over 30 are obese. The optimum WR for men is 102 CM and for women 88 CM. This criteria was revised in 2000 for Asia pacific region and persons with the BMI of 23 are regarded overweight and above 25 as obese. The WR criteria was also lowered for Asian as 90 cm for men and 80cm for women[3]. This difference from western standard was proposed because Asian people posses more adiposity at identical level of BMI and waist circumference.

The perception of obesity as a health problem differs between medical profession & common man. For a layman it is normal to be overweight, for some it is a sign of richness and on some community a symbol of beauty[4]. This wide difference in opinion is probably main hindrance to commitment to maintain normal weight. Hippocrates (460-370 BC)described obesity as a disease and harbinger of many other diseases[4]. Shurustra (6th century) related obesity to DM and heart disease[5]. Surprisingly in modern medicine obesity took attention only during the last 10 years and American Medical Association included obesity as a disease lately in 2013.

Correspondence: Prof. Dr. Muhammad Masroor, Principal, Dow International Medicl College, Dow University of Health Sciences, Karachi, Pakistan.

Email: mmasroor@duhs.edu.pk

It is evident now that obesity is a disease, is associated with some diseases and predisposes to and many other diseases, including HTN, DM, CVD, Gout, OA, renal diseases metabolism syndrome, fatty liver disease, obstructive sleep apnoea, and other psychosocial issue. Obesity is one of the major causes of non alcoholic fatty liver disease (NAFLD) which may progress to NASH, Liver Fibroses, Cirrhosis and HCC. Many of these diseases are among the top ten causes of death.

The South Asia has few notable differences from Western Countries. Obesity is on rapid rise and incidence is proportional to Socio Economic Status (SES) of the population. Women are more affected and there is a high percentage of people having central (abdominal) obesity representing higher visceral fat content. Moreover, there are cases with normal BMI but having central obesity as defined by waist circumference. These features are likely going to increase incidence of CVD, NAFLD & Insulin resistance & Type 2 DM in this region[5].

To simplify, the obesity results from an interaction between availability and consumption of excess food and a sedentary life style in genetically predisposed individuals. However, recent research in obesity models proves that obesity results from multiple factors including psychological, environmental, socioeconomic status (SES), attitude, and life style. Improvement in life standard, availability and consumption of energy dense food has resulted in storming rise in obesity in developing countries.

Genetic susceptibility to obesity is well documented. Obesity is 2-8 times higher in a person belonging to obese family. Eighty percent offspring of two obese parents are obese compared to only 10% of obese person with non-obese parents. Obesity is also more common in monozygotic twins. More than, 200 different genes and loci have been linked to obesity in humans[6]. The pattern of inheritance is not clear. There are around 30 mendalian rare disorders in which obesity is an important clinical feature and is monogenic (syndromic obesity).

Most cases are polygenic. More than 253 quantitative Trait Loci (QLTs) have been identified on genome wide linkage scan and many are linked to obesity[8].

Thrifty gene hypothesis suggested by Neel in 1960[7] and further elaborated by Pitchared[8] and associate explains obesity in low birth weight children and in those who were deprived of food in their early life. The natural selection in these individuals result obesity when abundant food became available. Epigenetic influences are also important for both rare and common forms of obesity.

However the rapid rise in incidence of obesity cannot be explained the basis of heredity.

Pakistan is one of the badly affected country by this obesity pandemic. The 1990-1994 National Health Survey of Pakistan[9] gave alarming figures in this context. Around 40% of women and 20% of men are obese or overweight. Prevalence is higher than any other country of the Asia Pacific region Obesity was also found most prevalent in Urban Areas. This has mostly been linked to consumption of energy dense food due to cooking style, westernization & urbanization. Recent report of media indicates that Pakistan has moved up acquiring 9th position in fattest county of the region. Rising trend in obesity in both genders & all ages and malnutrition on the other hand call for a national nutritional program urgently.

The options of management of obesity are limited and not very successful. Recent decline in prevalence of obesity in the United State and alarming rise in Kuwait, putting it as fattest country of the world[10] can provide a case study for researchers to understand the modifiable risk factors to control obesity. The opportunity about obesity is that it is preventable.

REFERENCES

1. www.infoplease.com/world/statistics/obesity.html
2. Despres JP, Lemieux I, Prud'homme D. Treatment of Obesity: need to focus on high risk abdominally obese patients Br Med J 2001; 322:716-20.
3. World Health Organization, Regional office for the western pacific, international association for the study of obesity. International obesity task force. The asia-pacific perspective: redefining obesity and its treatment. Melbourne, Health Communications Australia, 2000.
4. Haslam DW, James WP. Obesity. Lancet 2005; 366:1197-209.
5. Dwivedi G, Dwivedi S. History of Med: Sushruta- The clinician teacher par excellence, Indian J Chest Dis Allied Sci 2007; 49:243-4.
6. Weinstock-Mathew June 2013. The fact about obesity H & HN American Hospital Association retrieved.
7. Petersen KF, Dufour S, Feng J, Befroy D, Duziura J, Della MC, et al. Increased prevalence of insulin resistance and nonalcoholic fatty liver disease in Asian-Indian men. Proc Natl Acad Sci USA 2006; 103:18273-7.
8. Rankinen T, Zuberi A, Chagnon TC, Welts B, Perusse L, Bouchared C. The human obesity gene map: the 2005 update Obesity (silver Spring) 2006; 14:529-644.
9. Sorensen TI, Soren ME. Obesity genes: identifying singles genes involoved in polygenic inheritance is not easy. Br Med J 2001; 322:630-31.
10. Neel JV. Diabetes mellitus: a 'thrifty genotype rendered detrimental by progress AM J Hum Genet 1962 14:353-62.
11. Pakistan Medical Research Council. National Health Survey of Pakistan, Islamabad, Pakistan publication Service, 1998.