Chapter 16

Obesity Physical and Mental Health Consequences in Ageing

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ABSTRACT

This chapter describes the prevalence of obesity which is rising in all age groups. The World Health Organization declared obesity as a Global epidemic. There has been the abundance of research in all over the world that provides evidence for physical and mental health consequences of obesity. Obesity is considered as one of the leading cause of various non-communicable diseases. Higher body mass index and abdominal obesity are considered to be an independent risk factor that significantly contribute to the increased prevalence of Type 2 diabetes, cardiovascular diseases and hypertension, metabolic disorders along with various mental health problems among elderly. Geriatric obesity further affects the treatment process, outcome, quality and quantity of life older adults. It also increases the risk of disability among older adults.

INTRODUCTION

Obesity is defined as abnormal or extensive fat accumulation that negatively affects health (Han & Bchir, 2013). According to the World Health Organization (WHO), obesity is defined as Body Mass Index (BMI) $\geq$ 30 kg/m2 and central obesity as a waist circumference greater than 102 cm in men and 88 cm in women (WHO, 2000). But in older adults, body composition changes that accompany aging make BMI less appropriate for use. This is because BMI relies on muscle mass to influence the ratio of height-to-weight, and aging is accompanied by a decline in muscle mass. BMI also relies on height, and there is often height reduction in older adults due to osteoporosis-related vertebral compression fractures and
kyphosis. Better measures in older adults are waist circumference and waist-to-hip ratio. Both correlate well with measures of visceral fat as determined by computed tomography (CT) and with the rates of obesity-related diseases. Waist circumference, which is easy to measure, is a stronger predictor than BMI of mortality in older women (Keller, Shaw-Snyder, & Ainsworth, 2015).

It is a complex multifactorial disease arises from the interactions between genetic, environmental and behavioral factors together with other factors results in energy imbalance and promotes excessive fat deposition (Faroqi et al., 2010). Obesity is now recognized as the most prevalent metabolic disease worldwide, reaching epidemic proportions in both developed and developing countries and affecting all age group (Michalakis, Mintziori, Kaprara, Tarlatzis, & Goulis, 2013). Over the past several decades, the proportion of obese elderly increased. Improvements in health care have contributed to a significant increase in life expectancy and have influenced the growth of the elderly population. Projection indicates that by the year 2020 there will be 470 million people aged 65 and above in developing countries which will be more than double the number of the developed world (WHO, 1992). This increase is accompanied by a similar rise in the occurrence of age- and nutrition-associated diseases including obesity, cardiovascular disease, and diabetes mellitus (Westendorp, 2006). Elderly people who belong to middle and higher income groups are prone to develop obesity and its related complications due to a sedentary lifestyle and decreased physical activity. Obesity is a significant risk factor for coronary artery disease, hypertension, cholelithiasis, diabetes, osteoarthritis (Swami, Bhatia, Gupta, & Bhatia, 2005). The rate of dementia is also higher among obese older adults. Moreover, older persons who are obese (BMI ≥ 30) have a greater rate of nursing home admissions than non-obese seniors (BMI: 18.5 - 24.9) (Salihu, Bonnema, & Alio, 2009). The body mass index associated with the lowest mortality falls within the range of 18.5 to 24.9 in men & women between the ages of 30 and 74 (Stevens, 2000). It was found that BMI of 26 or more is a significant risk factor for diabetes and BMI more than 30 was significantly associated with arthritis and hypertension (Oster, & Maskides, 2005). Thus, with more people surviving in later life, more obese will be living and having certain morbidities as the effect of obesity.

WORLD SCENARIO

Prevalence of obesity is increasing in both developed and developing countries (Prentice & Jebb, 1995). It is considered the fifth leading risk factor for deaths all over the world as about 2.8 million people die due to obesity each year directly or indirectly. Obesity in elderly is considered one of the most serious public health challenges for all over the world. The prevalence of obesity in different countries varies from 10%-40%. It was estimated that the prevalence of obesity in elderly Americans, aged 60 years and older is 37.4%. While 25% of Australians aged 65–74 years and 14.4% over 75 years were obese. In the United Kingdom, nearly 25% of women and 18% of men aged 65–75 years and 22% of women and 12% of men aged 75 years or older suffering from overweight or obesity (Elisabeth, Vliegen, Basdevant, & Finer 2012; Dutra et al., 2013). In general, Prevalence of obesity in the Middle Eastern countries has reached to an alarming rate among all age groups as Prevalence of obesity in Bahrain 37.9%, Jordan 37.9% and Lebanon 27.4%. While, In Saudi 15.75% of elderly aged 60 years and more are obese. On the other hand, In Egypt 2006, the prevalence of Overweight and obesity among elderly in rural population is 62.3%. (Mahfouz, Sameh, & Areny, 2006; Musaiger, 2011).