

OBSESITY IN ELDERLY – IS IT HARMFUL?

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Abstract: Obesity has become a worldwide health problem even in elderly population. In India its prevalence is reported as 20.9% to 39.8% in this group of population. Changes in body composition occur during the ageing process. There is wasting of fat free mass, which is replaced by the fatty tissue. High prevalence of cardiovascular risk factors in this age group like hypertension and diabetes mellitus also play an important role in obesity. The physiological modifications of physical and motor skills that accompany the advancing age leads to restriction of physical activities. Limited physical activity, chronic inflammation and endocrine changes that occur with ageing contribute to obesity. Regular aerobic exercises along with caloric restriction remains the most successful method of weight reduction. Drug therapy should be individualized and must take into account of the other drugs that patient may be taking, to avoid any adverse drug interaction. Surgical treatment like bariatric surgery is hardly ever tried in this group because of the associated surgical risks. A clinical psychologist or a psychiatrist may also be involved to care for the emotional aspects of these patients.

EPIDEMIOLOGY

Obesity has now become a world-wide health problem at all ages of the human lifespan. Obesity once considered a health problem of the West has also encroached upon the developing countries of the world.¹ India is also observing a gradual phenomenon of graying of her population. Elderly subjects comprise 6.7% of the Indian population. Elderly individuals particularly in high and middle income groups are vulnerable to over nutrition and obesity. A community based study conducted amongst elderly subjects in urban slums of Delhi reported a lower prevalence of overweight and obesity.² In an another study conducted in Chandigarh overweight was present in 60% of the elderly subjects whose daily caloric intake was more than 2000 Kcals.³ In this study obesity and overweight were noticed to be maximum (39.8%) in 65 to 74 age group and comes down to nearly half (20.9%) as age increase beyond 85 years³. The prevalence of overweight and obesity was found to be higher (42.1%) in females as compared to the males (20.9%)

In children and adults, obesity is easily defined as an excess of body weight and adipose tissue, but there is no consensus on the definitions for obesity among the elderly for any race or ethnic group nor are there genetic determinants of these definitions. The World Health Organization has laid down values of BMI for the classification of overweight and obesity, as well as “at risk” values for waist circumference and waist-to-hip ratio., whether these values are appropriate targets for the elderly population are yet to be validated. Methods of assessing obesity among the elderly need to be reviewed so as to improve our understanding of the changes occurring at this stage of life and their relationships with concurrent metabolic changes and subsequent health problems.

Changes in body composition occur during the aging process. Obesity is accompanied by an increase in fat-free mass, but in the elderly, the wasting of fat-free mass can produce obesity characterized by a stable or low body weight but a high percentage of body fat.

The prevalence of this sarcopenic-obesity increases with age in each sex. Cross-sectional as well as longitudinal studies indicate that subjects classified as sarcopenic-obese show

significantly higher prevalence of physical impairment and disability, as well as higher prevalence of metabolic syndrome.

PATHO-PHYSIOLOGY

Fat redistribution, absolute or relative sarcopenia, limited physical activity and fitness, chronic inflammation and endocrine changes that occur with aging are the factors that contributes to obesity.^{7,8} These factors may be important in determining the onset, duration and consequences of obesity. The physiological modifications of physical and motor skills that inevitably accompany advancing age are even more emphasized by sedentary life style, which are cause and or effect of increased fat in the elderly individuals. The lack of sufficient exercise leads to loss of muscle tone and loss of mineral contents of the bone and as a result predisposes these individuals to fractures and immobilization. The mobility of the lower limbs is extremely reduced due to degenerative changes in knee and other joints of lower limbs.

Obese elderly patients often have impaired respiratory functions that involve the whole respiratory parameters. Incidence of sleep apnoea syndrome increases in elderly obese individuals that leads to hypoxia during sleep and leads to hallucinatory and cognitive disorders.

There is high prevalence of cardiovascular risk factors like high blood pressure and diabetes in these individuals. Prevalence of Type -2 Diabetes rises sharply among the elderly population which may be the end result of the interplay of genetic and environmental factors⁵. The most important environmental factor is the physical inactivity and obesity⁶. Current hypothesis suggest that type -2 diabetes is an inflammatory disease and the inflammation is the primary cause of obesity –linked insulin resistance and hyperglycemia. Obesity in insulin resistance individuals is associated with low grade chronic systemic inflammation as revealed by increased level of CRP,IL-6 and TNF. In addition to this, these people have low HDL and high fasting plasma sugars, which may be related to a high level of visceral fat accumulation during the aging process. This metabolic syndrome is associated with increased risk of cardiovascular disease independently of the traditional cardiovascular risk factors.

A large number of studies points that obesity in middle age increases the risk of future dementia independently of comorbid conditions. There is also a close association obesity

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and depression. Obese women negative emotional state seems to predict poor treatment outcome. Overweight and obese subjects have greater decrease in sexual desire as compared to normal weight subjects.

MANGEMENT

There is overall deterioration in quality of life in elderly obese subjects, hence this subject needs to be seriously addressed by the health care providers. Weight maintenance along with leading a healthy life style in terms of diet and physical activity are the key component of preventive aspect. Measures to reduce weight should take into account the other obesity related co-morbid conditions. Sudden change in lifestyle may not be achievable so easily because of financial, social and other health constraints.

Medical nutritional therapy must take into account dietary habits, economic factors and patient preferences. Each elderly individual has unique need ,so diet should be prepared accordingly. A special care should be taken to provide enough fluids, fiber , calcium, iron , folic acid and vitamins A,D,B12 and C without adding extra calories. Initially aim should be for modest weight reduction and once a person is compliant more stricter goals can be given.

Exercise along with caloric restriction is by far the most successful method of weight reduction. Aerobic exercise and progressive resistance and endurance program not only will help in decreasing body weight but will also improve the functional ability of a person. The purpose of physical activity programmes should be aimed at improving the quality of life and functional capabilities.

Drug therapy for obesity may be useful in elderly, but while prescribing these drugs one must take into account the other drugs the patient may be taking to avoid any kind of adverse

drug interactions. Though literature is quite scarce in this field but bariatric surgery may prove useful in cases of morbid obesity which is not being controlled by other conventional methods. Along with weight reduction attention may also be given toward psychophysical health of the elderly people. It is necessary to give emotional support to the intense request for care, to the feeling of inadequacy, to the constant catastrophic thoughts that lead to anxiety and depression. Hence help of a psychologist or a psychiatrist may be required to deal with this problem.

As we are observing a world wide phenomenon of obesity even among our elderly population and obesity in elderly affects adversely their quality of life, hence this issue must be addressed adequately by the health care providers

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