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Obesity: A global issue

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Commentary Article

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DESCRIPTION

Obesity is a complex multifactorial chronic disease condition where extra body fat storage cause severe health problems like heart diseases, obstructive sleep apnea, osteoarthritis, type 2 diabetes and certain types of cancers, which in turn reduce life expectancy [1,2,34,44,51,61,62,69,77]. These disorders are also referred to as Obesity-related Comorbidities, and have a significant impact on morbidity rates [3,32]. Obesity is one of the main reasons of preventable death [4,5,6,82]. Body mass index (BMI) is a tool for monitoring obesity and is closely related to both percentage body fat and total body fat, BMI more than 30 Kg/m² considered as obese and with the range 25-30 kg/m² as overweight [7,8,36]. The common cause of obesity is poor dietary habit, lack of physical work, genetic susceptibility whereas in some cases genes, medications, psychiatric illness and endocrine disorders are the cause [9,49,59,78,80,84].

In last couple of decades the frequency of obesity and overweight has increased significantly. It is associated with several health related problems in childhood and became a risk factor for obesity in adulthood [10,26,33,39,53,64,67]. This high income called disease is notifying its presence even in low income countries [40,60]. A multi-disciplinary strategy along with the multiple stakeholders is required to reduce the prevalence of obesity [11,28,43]. This widely recognized leading health concern demanded that the underlying causes of obesity need to be examined closely [12].

The main cause of obesity is the disequilibrium between energy intake and expenditure. The people receiving antiretroviral medications are under increased risk of serious health issues associated with obesity [13,31]. The recently available treatment of the obesity aimed at accelerating the energy expenditure and to decrease the calorie intake which in turn shows long time side effects as reduced intestinal ingestion [14,68]. The knowledge of the regulation of thermogenesis mechanism in mammals has raised a hope that the adrenergic receptors beta and/or thyroid hormone activating receptors can be effective in the treatment of obesity [14,81].

The expansion of adipose tissue and visceral fat depots increases the risk of obesity complications. Patient with systemic lupus erythematosus has high risk of cardiology and disability which may confer by obesity. Improvement in lifestyle and dietary can reduce the weight which in turn improves the clinical manifestation of the disease [38,57,63,75]. Bariatric surgery proved to be an option as it is associated with less immunosuppressive therapy whereas laparoscopic silicone gastric banding should be avoided [15]. Hatha yoga has also seen to improve physical and psychological functioning in youth with severe obesity [54].

The rapid spread of chronic diseases like obesity, diabetes, neurological disorders and their complications are predicted to reach 1 in 5 people by the year 2050. Obesity can increase the risk of atherosclerosis as indicated by epidemiological studies [16,71]. Human are more prone to obesity than mammals which indicates that human genes malfunction with mitochondrial apoptosis seems to increase the risk of degenerative diseases and non-alcoholic fatty liver disease [16].

According to Ramoshaba et al. obesity is emerging rapidly as one of the major cause of cardiovascular disease (CVD) [17,55,65,71,76,79]. It is found that one-third of arterial hypertension cases in adults are associated with obesity [30,42,56,73]. Obese and underweight children at early stage have high risk of CVD in the long term [37].

Fernández et al. has explained the relationship between pregnancy and obesity. Maternal obesity increase the risk of congenital defects in the offspring as neural tube defects, cardiovascular malformations and orofacial cleft [18]. Physicians should be concuss for obese pregnant women and provide a good prenatal service. Physicians must keep in mind this situation in order to offer a good prenatal service to obese pregnant woman [18,46,72].

Obese children have high risk to fractures compared to general paediatric population might be because of the bone weakness or significant injury kinetics. The cause of fracture is unclear and is a matter of debate in scientific community. It seems that osteopenia during the growth of children is the major reason. The diet of the children and hormonal changes affect the biomechanical properties of the bone [19,48,53].

The main cause of obesity is sedentary lifestyle of the people as they are least bothered about their diet and excessively take easily available food contains carbohydrate and fat and used to ignore other vital components of the food [41,58]. Recent researches have shown that the physical activity of the children and adolescents are decreased by 30% [20,27,29]. According to the estimation of World Health Organisation (WHO) 1.4 billion adults are overweight out of which 300 million women and 200 million men are obese [21,45], whereas 20 million children under age five are overweight [22]. Globally one in every ten children is affected with overweight [22]. Obesity has found to be associated with increased mortality; common medical conditions as cardiovascular disease, diabetes and it increase the health costs [23,35]. The presence of obesity with the progressive disease diabetes may lessen the effectiveness of therapy which in turn adversely affects patient's health outcomes [24].

High stress workplaces are associated with high risk of overweight, obesity, hypertension, cardiovascular diseases and psychological issues because of high job demands and low job control [25,74]. High stressed employees follow the poor eating habit, low physical activity, smoking/alcohol use and extended work hours. Health promotion and wellness programmes should be conducted frequently at work places and employers should be in contact with health care professionals and supervisors to promote a culture of wellness. Employees should take their health as priority to live a healthy life [25,50].

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