

Hypertension in relation to overweight/obesity among adolescents in Mashhad, Iran (e-poster)

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Abstract

Hypertension in adolescents is new concern in recent decades. Increasing cardiovascular risk factor like hypertension is expounded to overweight and obesity among adolescents. Both obesity and hypertension as important public health challenges are increasing worldwide. a rise in both Body Mass Index (BMI) and Waist Circumference (WC) is linked to an increased risk of cardiovascular diseases. The aim of this study was to work out the prevalence of hypertension among the adolescents and investigate its relationship with overweight and obesity in Mashhad city. This cross sectional study was conducted among 1189 urban middle school children who studied in 10 schools (over ally selected from 501 schools), in both low and high socio-demographic districts of Mashhad. Students' vital sign was measured and categorized per the standardized technique described by the American Heart Association (national high pressure education program working party on high force per unit area in children and adolescents). Prevalence of hypertension was 14.6% in terms of Diastolic Blood (DBP) and 4% in terms of Systolic Blood (SBP). SBP was more prevalent among males (5.2%), while DBP was more prevalent among females (15.1%), combined hypertension was doubled in males compared with females. In terms of SBP, about 58% of overweight/obese adolescents were hypertensive. the connection between BMI and SBP was statistically significant. Also, 18.8% of central overweight/obese adolescents were hypertensive, while WC was significantly associated with SBP.

In terms of DBP about 56.8% of overweight/obese adolescents were hypertensive and also the relationship between BMI and DBP was statistically significant. On the opposite hand 17.9% of central overweight/obese adolescents were hypertensive while WC was significantly associated with DBP. Childhood obesity is thought as an increasingly health concern in Mashhad. Obesity as leading

reason for pediatric hypertension threatens adolescents' health and life during this area. So, policies are needed on its control. Hypertension in adolescents is new concern in recent decades. Increasing cardiovascular risk factor like hypertension is expounded to overweight and obesity among adolescents. Both, obesity and hypertension as important public health challenges are increasing worldwide. a rise in both body mass index (BMI) and waist circumference (WC) is linked to an increased risk of cardiovascular diseases. Globally, every year, many premature deaths and disability-adjusted life years are associated with hypertension. it's been predicted a large number of hypertensive peoples to total of 1.56 billion by the year 2025. the connection of hypertension and obesity is way more complex than previously supposed. Studies have revealed the link of high BMI with systolic vital sign (SBP) and diastolic vital sign (DBP). the aim of this study was to work out the prevalence of hypertension among the adolescents and investigate its relationship with overweight and obesity in Mashhad city. The prevalence of childhood obesity has reached alarming rates world-wide.

The aetiology seems to be an interplay between genetic and environmental factors, and a surrogate measure of this complex interaction is usually recommended as familial predisposition. Familial predisposition to obesity and related disorder (CVD) complications constitute the presence of obesity and/or obesity-related complications in primarily blood-related members of the family. The approaches of its measurement and applicability vary, and therefore the evidence especially of its influence on obesity and obesity treatment in childhood is restricted. Studies have linked a familial predisposition of obesity, CVD (hypertension, dyslipidaemia and thromboembolic events), and sort 2 DM to BMI furthermore as other adiposity measures in children, suggesting degrees of familial aggregation of metabolic derangements. A pattern of predispositions arising from mothers, parents or grandparents as being most influential are found, but further

Extended Abstract

comprehensive studies are needed so as to specify the precise implications of familial predisposition. within the scope of childhood obesity this text reviews this literature regarding familial predisposition to obesity and obesity-related complications, and the way these familial predispositions may impact obesity within the offspring. Background: Hypertension (HTN) is a vital public health challenge worldwide. The prevalence of HTN varies across countries. it's necessary to get valid information about the prevalence of chronic condition like HTN and its predictors in several societies. Hence, this study was conducted to assess the prevalence of HTN and associated factors in Mashhad, Iran, 2015. This cross-sectional study was performed on 2974 adults residing in Mashhad in 2015. Multistage sampling was used. A checklist was fulfilled for every subject, and a blood sample was taken for measuring fasting blood glucose, total cholesterol, triglycerides, hemoglobin, serum creatinine, high-density lipoproteins, and low-density lipoproteins. the peak and

weight of participants and their vital sign were measured in keeping with protocols. The prevalence of HTN during this population was 22% (25.9% in male and 20% in female). Most interestingly, smoking and abuse were more prevalent in men (14.9% and 3.8%), but the sedentary behavior was more prevalent in women (51%). Interestingly, by increasing the age, the frequency of optimum, normal and high normal type was decreased and also the frequency of HTN, specially sever form were increased. In binary logistic regression model, age [odds ratio (OR): 1.07, 95% confidence interval (CI): 1.06-1.09], gender (Ref:Female) (OR: 1.39, 95% CI: 1.05-1.83), and obesity (OR: 1.09, 95% CI: 1.06-1.12) were the predictors of HTN. The prevalence of HTN among this population was found to be high; which indicates the necessity for HTN-screening programs, especially for the elderly, male and obese population. Given the close relationship between obesity and various diseases, including HTN, practical solutions, including lifestyle interventions, must be developed.