Abstract

Retarded growth in fetal life was strongly related to high blood pressure in later life. But little is known about this association in developing countries, where fetal growth retardation is common. Adult stature is a proxy indicator of poor fetal nutrition. Therefore the present study was carried out to assess the association between height and blood pressure among women in a selected cohort. Two hundred women age between 20-60y participated in the study. Some anthropometric and blood pressure measurements were taken in their households. Prevalence of hypertension was estimated and correlation between blood pressure and anthropometric measures of height and adiposity were determined. Height did not show a significant linear correlation with either systolic blood pressure (SBP) or diastolic blood pressure (DBP). Age, BMI, waist circumference, waist: hip and waist: height ratios were positively correlated with blood pressure. Age and waist: height ratios were independent variables contributing 31% and 25% of the variability in SBP and DBP according to stepwise multiple regression analysis. Short (<25th percentile) and normal (>25th percentile) individuals showed no significant difference in SBP and DBP. Short postmenopausal women had higher systolic blood pressure than postmenopausal normal women (p=0.054). Prevalence of hypertension in the study cohort was 15%. Twenty five percent of women had blood pressure greater than the cut-off for normal. Age adjusted odds ratio for prevalence of hypertension was higher (OR=1.80) in the shortest quartile of stature distribution when compared with the tallest quartile (statistically not significant). Future research is essential to conduct with large sample size by considering genetic effects linked link with both height and hypertension. In conclusion, there was an apparent trend of increasing risk of getting hypertension among shorter individuals, compared with taller individuals. Present study showed evidence that shorter individuals usually have more tendency to get excess adiposity hence, the trend of association between stature and blood pressure reported in the present study may be due to adiposity (waist: height ratio).