Blood Pressures and Related Health Factors among Freshmen Attending an University in Taipei County

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Background: Many hypertensive studies done in Taiwan have focused on older population. There is a paucity of data on hypertension in young Taiwanese adults.

Methods: We analysed the prevalence of elevated systolic-diastolic blood pressure (SDBP), elevated isolated diastolic blood pressure (IDBP) and elevated isolated systolic blood pressure (ISBP), and the associations between systolic and diastolic blood pressures with possible risk factors [gender, body mass index (BMI), serum uric acid (UA), creatinine(Cr) and total cholesterol levels(TCHL)] among 7,706 freshmen (3,316 men) attending an university in Taipei county. Ordinary least square regression was applied to analyze the association of SBP or DBP with examined health factors.

Results: The prevalence of elevated blood pressure in this study population of young adults was 13 %. The prevalence of elevated SDBP among our total, male and female students was 3.0%, 6.0% and 0.8% respectively. The prevalence of elevated IDBP in male (15.1 %) and female freshmen (6.2%) was significantly higher than the prevalence of elevated ISBP (11.9% in males and 1.6% in females). The prevalence of hyperuricemia, hypercholesterolemia, and elevated serum CR were 41.7%, 30.5%, and 6.6% among our freshmen. Compared with female counterparts, male students tend to have higher BMI, SBP, DBP, UA, and Cr levels (p<0.001).

Conclusions: Our data showed the change the related health factors (gender, BMI, and serum Cr, TCHL and UA levels) was associated with DBP or SBP among our freshmen. Gender and BMI were the two strongest predictors for blood pressure in our study group.

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Key words: hypertension, body mass index, freshmen