URBAN AND RURAL DIFFERENCES OF BLOOD PRESSURE AND HYPERTENSION CONTROL IN CHINESE COMMUNITIES: PURE CHINA STUDY

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Background: Hypertension is a major contributor to the cardiovascular morbidity and mortality in China. With continued urbanization, China is facing unbalanced economic growth between urban and rural areas. This study was to assess urban and rural differences of blood pressure (BP) and hypertension, and to determine factors associated with hypertension control in Chinese communities.

Methods: Using data from Prospective Urban Rural Epidemiological (PURE) study, we analyzed 46,285 Chinese adults (35-70 years) from 272 rural and urban communities between 2005 and 2009. We assessed BP levels and factors associated with hypertension control by standardized questionnaires, which were completed by household visits or on patient's presentation to clinics.

Results: With age and sex adjusted, the prevalence of hypertension was significantly higher in rural (43.0%) than urban areas (38.6%), p<0.001. In both men and women, being in rural regions was associated with higher systolic blood pressure (SBP) and diastolic blood pressure (DBP). Among women, mean SBP and DBP were higher in rural than in urban areas for the entire age range (35-70 years), with average values of 134.6/83.2 mm Hg in rural and 130.3/80.8 mm Hg in urban (P<0.001). Among men, this pattern was only observed for persons from 50 to 70 years old. The percentage of awareness (48.8% urban vs. 34.2% rural, P<0.001), treatment (42.7% urban vs. 26.0% rural, P<0.001) and control of hypertension (12.0% urban vs. 4.3% rural, P<0.001) were all higher in urban than in rural areas. Multiple logistic regression model showed that the educational level of the participant and socio-economic development of the communities were independently associated with control of hypertension.

Conclusions: Our findings suggested that more work will be needed for hypertension control to prevent its consequences in rural areas of China.