GIM-02

PROGRESSION OF PRE HYPERTENSION, STAGE1 AND 2 HYPERTENSION(JNC 7): A POPULATION-BASED STUDY IN KEELUNG TAIWAN

Chuen-Den Tseng[1,2],Y-H Chiu[2],S-C Wu[2],Tony Chen[2]

1.Department of Internal Medicine,National Taiwan University Hospital,Taipei,Taiwan,Republic of China

2. Institute of Preventive Medicine,College of Public Health,National Taiwan University,Taipei,Taiwan,Republic of China

BACKGROUND/AIMS: The natural history of hypertension has rarely been studied, particularly in Asia. The purpose of this study is to investigate the natural course of multistate hypertension in Taiwan in the light of the Seventh Report of Joint National Committee.

METHODS: A prospective cohort with 67011 individuals 20 to 79 years of age, and derived from an integrated community-based multiple screening program between 1999 and 2003 in Keelung, Taiwan, was designed. Of 67011, 22111 were re-examined with intervals varying from 1 to 4 years, yielding 53689 repeated recording of blood pressure from which seven transition modes were obtained.

RESULTS: The overall prevalence rate was 33.4%, 18.3%, and 8.8%, with the corresponding estimates of mean age 50.0, 56.3, and 58.7 years, for prehypertension, stage 1 hypertension, and stage 2 hypertension, respectively. For multistep transition, annual progression rates from normal to stage 1 or stage 2 hypertension increased with age, whereas annual progression rate of successive transitions in one-step transition slightly increased with age. Males had higher rates, particularly normal to prehypertension, than females below 50 years of age. Annual regression rates from prehypertension to normal were higher in the younger age group or females compared with older or male patients. Significant factors leading to the progression of hypertension included high waist circumference, total cholesterol, low high-density lipoprotein, betel nuts, parents with hypertension or diabetes, whereas significant factors responsible for the regression from prehypertension to normal include body mass index and fasting glucose, betel nut chewing and parents with hypertension.

CONCLUSION: Stopping the progression of prehypertension to severe hypertension or facilitating the regression to normal plays an important role in the prevention of hypertension.

Keywords: Prehypertension, Hypertension, Population-based study