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**Objective** To investigate whether the intensified antihypertensive treatment (the goal blood pressure  $\leq 140/90$  mm Hg), compared with the routine therapy (the goal blood pressure  $\leq 150/90$  mm Hg), would further improve cardiovascular outcome in older than 70 of Chinese hypertensive patients, and whether the visit-to-visit variability in blood pressure, was a risk of cardiovascular events.

**Methods** In a randomised, open label, blinded end point evaluation, single centre study, 723 high risk hypertensive patients were randomly assigned to either intensified antihypertensive treatment or routine therapy. In both groups, randomised patients started with single drug treatment of an angiotensin-converting enzyme inhibitor, a  $\beta$ -blocker, a calcium-channel blocker, or a diuretic. To achieve the target blood pressure, one, two or three additional antihypertensive drugs could be added in patients in both groups. Four weeks, 3 months, 6 months and every 6 months thereafter clinic blood pressure was measured in the follow-up period. Primary composite end point consisted of fatal and non-fatal stroke, fatal and non-fatal myocardial infarction, and other cardiovascular death.

**Results** At baseline, characteristics of the participants in the two groups were similar. During a mean follow-up of 4 years, systolic/diastolic BPs ( $\pm$ SD) decreased to  $(135.7\pm 9.0)/(76.2\pm 6.1)$  mm Hg in the intensive BP control group and  $(149.7\pm 11.0)/(82.1\pm 7.5)$  mm Hg in the routine therapy group. The between-group differences in blood pressure were 14 and 6 mm Hg, respectively. Visit-to-visit variability (expressed as standard deviation (SD)) in SBP and DBP was obviously lower in the intensive BP control group than in the routine therapy group. Intensified antihypertensive treatment, compared with routine therapy, reduced total and cardiovascular mortality by 41.7% ( $p=0.001$ ) and 50.2% ( $p=0.002$ ), respectively. Furthermore, intensified antihypertensive treatment also reduced the incidence of the primary composite end point by 40.2% ( $p=0.005$ ), fatal and non-fatal stroke by 41.9% ( $p=0.039$ ), and fatal heart failure by 62.7% ( $p=0.032$ ). The incidence of acute myocardial infarction was no difference in two groups ( $p=0.992$ ). Cox regression analysis shows that the average SBP ( $p=0.020$ , 95% CI 1.006 to 1.069) and SD SBP ( $p=0.033$ , 95% CI 1.006 to 1.151) were risk factor of endpoint events.

**Conclusions** In older than 70 of Chinese hypertensive patients, long-term intensified antihypertensive treatment substantially lowered fatal and non-fatal stroke and fatal heart failure mortality when systolic/diastolic blood pressure approximated to 136/76 mm Hg, and the long-term visit-to-visit variability in systolic blood pressure was associated with high risk of cardiovascular events.

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# INTENSIFIED ANTIHYPERTENSIVE THERAPY AND BLOOD PRESSURE VARIABILITY IN OLDER THAN 70 OF CHINESE HYPERTENSIVE PATIENTS

Jin Zhimin,<sup>1</sup> Shen Guoying,<sup>1</sup> Zhao Xiaowei,<sup>1</sup> Zhong Ye,<sup>1</sup> Fei Pingyan,<sup>1</sup> Pan Junying,<sup>1</sup> Wang Jiguang<sup>2</sup> <sup>1</sup>Shanghai Songjiang District Central Hospital, Shanghai, China; <sup>2</sup>Centre For Epidemiological Studies and Clinical Trials, Rujin Hospital, Shanghai Institute of Hypertension, Shanghai Jiao Tong University, Shanghai, China